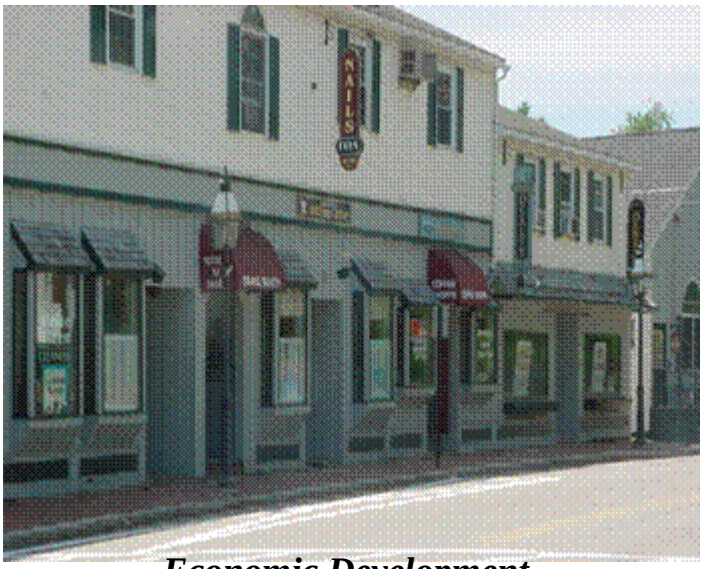
ASHBURNHAM
COMMUNITY DEVELOPMENT PLAN
2004

Housing

Open Space & Resource Protection



Economic Development

Transportation

Submitted to: Town of Ashburnham
Prepared by: Montachusett Regional Planning Commission
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Executive Order 418

Ashburnham

Community Development Plan

June 30, 2004

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I. INTRODUCTION

A. STATEMENT OF PURPOSE

When considering expansion of its commercial or industrial sectors, a community must consider the housing needed for the associated labor force. When thinking about housing needs, a community must think about the best type, quantity and location of housing in relationship to the protection of natural resources and the proximity to transportation. In assessing options for open space protection, a community must think about its effect on future residential development and quality of life. Communities must provide diverse housing and economic opportunities for residents, while considering the impacts on transportation and finite natural resources such as water, open space, and habitat.

As a follow-up to the recently completed buildout analysis effort sponsored by the Executive Office of Environmental Affairs, the Commonwealth provided $30,000 in planning services to each of the participating cities and towns to draft a Community Development Plan. The planning assistance aided communities in achieving a balance of four interrelated core elements that define their quality of life and community character, as follows:

- Location, type, and quantity of new housing units, including housing affordable to individuals and families across a broad range of income;
- Location, type, and quantity of open space to be protected including identification and prioritization of environmentally critical unprotected open space, land critical to sustaining surface and groundwater quality and quantity, and environmental resources;
- Location, type, and quantity of commercial and industrial economic development, and;
- Location and description of any improvements to transportation, e.g., bridge work, road widening, revised intersections, commuter rail stop, traffic calming.

The Open Space and Natural Resources element identifies the land the community deems critical to sustaining a its water supply, water quality and natural resources, to assist municipal decision-makers in understanding the ecological carrying capacity of the community and the availability of water resources to support alternative buildout scenarios. The plan aids the community to understand where new development, such as additional housing units, can be provided with minimal detrimental effect upon these natural resources. Siting commercial and industrial zoning away from aquifers or other areas critical to sustaining the existing and potential public water supplies is important and can be achieved by balancing these interests with awareness and foresight. Recommendations include steps necessary to protect critical habitat and scenic landscapes, create greenways, and provide recreational opportunities, in order to promote the quality of life in the community.

The GIS-based Land Use Suitability Map illustrates the types and locations of natural resources and their sensitivity to development. It also delineates areas that are most suited for additional housing, commercial, retail, industrial, transportation, or other development; and the priorities for protection or sensitive development for habitat preservation, protection of water resources, provision of recreational opportunities, preservation of vistas, conservation of landscapes that are elements of a community's character, or other purpose.

The Economic Development Element addresses the need of the community to develop a sustainable commercial and industrial infrastructure to serve as a tax base for communities, and to provide a robust local economy that enhances the quality of life. Sustainable development considers the needs of future generations and recognizes the connectedness of social, economic and environmental goals. It encourages the location of development where services and infrastructure such as water, sewer, and transportation services are already available.

The Housing element assesses the housing need in the community and identifies options, such as adaptive reuse of historic buildings, to provide a variety of housing opportunities for people from a broad range of income levels, while preserving community character and preventing pressure on additional natural resources.

The Transportation Element includes two areas of investigation. The first is a comprehensive traffic engineering investigation of intersections of concern related to the safe and efficient flow of traffic at Routes 12 and 101 in order

to develop viable alternatives and improvements that can be implemented by the community that addresses the identified problems and deficiencies. The second area of investigation involves the development of a Trail Plan that can be utilized by the Town to establish goals and objectives related to the development of multi-purpose trails within the community.

Information and recommendations developed in this element can be used by the Town to request approval and funding assistance from MassHighway for any future projects.

B. PLANNING PROCESS AND PUBLIC PARTICIPATION

A successful community development plan begins with a clear understanding of the current realities and the vision residents have for the future of their town. To this end, the planning process includes a Visioning phase to identify the points on which residents agree and disagree, and to build a common framework for addressing needed change.

1. Visioning Forum

The Montachusett Regional Planning Commission (MRPC) conducted a forum on August 12, 2003, to solicit input from residents and local officials about the Town of Ashburnham. Through a question-and-answer process, MRPC was able to elicit ideas and suggestions on housing and economic development needs, open space and resource protection interests, and transportation issues from local residents. Key questions that opened the discussions are listed below:

- If you had to describe Ashburnham in one word, what would that word be?
- What do we like about Ashburnham?
- What would we like to change?
- What areas of the community should be preserved as open space and for recreation?
- Where should housing be developed?
- How can we develop more housing if we have no public water or sewerage system?
- Where can our elderly reside once they can no longer maintain their own homes?
- Can your children afford to live here?
- Where should projects fostering economic development occur in the community?
- Where should transportation improvements be made to facilitate the local preservation and development scenarios?
- Are there conflicts with areas proposed for development and preservation?
- Does our zoning bylaw adequately protect the character of our community?

The forum was an important step in helping the community to develop an inventory of its assets and liabilities, to define a Vision Statement for the future of the community, and to create the foundation for a land use suitability map. These tools are stepping stones to aid the community in developing its goals, objectives and action strategies for creating the desired future.

2. Interlocal Cooperation

A number of concurrent planning activities were taking place as the Community Development Plan evolved. *Ashburnham was developing an Open Space and Recreation Plan and had recently completed a Master Plan.* The Millers River Basin Team of the former Massachusetts Watershed Initiative had several important projects in the pipeline that all had implications for Open Space management and Natural Resource Protection. The Nashua River Basin Team also had several important projects in the pipeline that all had implications for Open Space management and Natural Resource Protection.

The Watershed Basin Teams are comprised of many federal, state, regional and local entities, all of which are charged with making policy which affects the regional environment and water quality of the Millers River communities. Established under the Massachusetts Watershed Initiative of the Executive Office of Environmental Affairs, the Basin Teams sought to coordinate the policies of these disparate entities and develop a cohesive management

approach to improving water quality and protecting the watershed environment. Under their watch, numerous planning products were developed.

For the Millers River, these included an Assessment of Potential Non-point Sources of Pollution, a Regional Hydrologic Assessment, a watershed-wide Water Quality Assessment, and a Regional Open Space plan. McGregor and Associates is currently under contract with the Executive Office of Environmental Affairs to develop a Regional Open Space Plan for the Millers River Watershed, of which Ashburnham is a part. The contract also includes assistance for the towns of Templeton and Royalston to complete their open space plans. On May 20th, 2003, a public forum was held for residents of the Millers River Watershed Communities to develop the open space priorities for the Millers River region. Through this effort, Ashburnham and its neighboring communities in the Millers Watershed are developing compatible resource protection strategies.

For the Nashua River, these included including development of a Water Quality Sampling Program and Volunteer Monitoring Pro-gram, a Hydrologic Assessment of flow levels and safe yields by tributary sub-basins to identify stressed sub-watersheds and habitats, an Assessment of Watershed Habitats to develop an approach for prioritizing regional land protection, an inventory of local farms for future work on agricultural preservation and water quality protection, and a Five Year Action Plan outlining specific strategies to mitigate priority watershed problems and directing agencies, staff and other resources to best accomplish these strategies.

C. ASSETS AND LIABILITIES INVENTORY

The Assets and Liabilities Inventory defines the current assets the community values and wants to preserve, and it can highlight weak or unfavorable aspects that the community wants to change. It can be a useful tools in developing goals and objectives for the community development plan. It should provide a "visual tour" of the community –

1. Assets

- Lakes
- Rural character
- Large blocks of land in single ownership
- Historic downtown character
- Size of community
- Headwaters to 3 major watershed
- Trails/hills, mountains (Mt Watatic)
- School systems (public/private)
- Town meeting government
- People
- Close to urban areas
- COA transit

2. Liabilities

- Lacking growth in key sectors-economic development/housing
- No control on sprawl
- No activities for teenagers
- Limited tax base (due to private school)
- Roads “terrible” need paving and maintenance, but there’s limited funding
- One half hour to any where out of town
- Lacking Hospitals (nearest one is in Gardner)
- Lack of public transit (difficulty with transportation, must have a car)
- No public access to water for recreation. Its hidden.
- No sidewalks (near the post office for example)
- Not enough open recreation space
- All properties around lakes are privately controlled by lake associations

- Limited Funding. We've needed overrides for the past five years to stay within our means. We "can't afford affordable housing" it doesn't support the burden of services
- Lack of funding to support staff positions
- Changing character of town-new residents don't have the same ownership of the town!
- Price push of eastern housing market. Houses in excess of 500K

3. Needs

Access to Urban areas needs improvement
Fix 101/Rt 12 intersection within 5 years

Growth Management and Housing Accessibility

Town has been increasing since 1950- growth from Boston
Don't double population, we need growth control. "Houses spring up in swamps: water them they grow"
More "cluster" zoning "single family" houses detached homes
Need for assisted living, and places for elderly, who are "outgrowing " their homes and want to stay in Ashburnham
Need housing stock for college grad population
Appropriate town services to meet future needs
Town facilities all need something fire dept needs to be moved police dept needs to be upgraded

Increase Economic Development

Capitalize on what Ashburnham is-don't try to make it something its not
Develop a committee that represents the positive side of economic development-leadership
Revamp zoning for places for commercial/mixed business/light industry and recreation
Business expansion: expand tax base without increasing residential taxes
Need more restaurants (a real restaurant), full service and moderately priced
Need a pharmacy need card store

2 contingents:
- increase business, access (local)
- keep it the way it is (bedroom commuters) different commuter markets, populations.

Time for "changing of the guard"

Improve communication between boards in general
Improve capacity: (volunteer initiatives) need help
Whole system may need to change what worked 100 years ago may not work now
Training/education publicity
People need to be asked
Board meetings at times that work!
Town boards that help business not that push them away

Set aside specific areas, Integrate with open space
Develop the back lot space rather than road frontage, to preserve rural character
Cope with NIMBY issues
Support for town website
Outreach for town positions

D. VISION STATEMENT

The Public Forum served as a vehicle to develop the Vision that Ashburnham residents have for the Town. The Assets and Liabilities Inventory and an interactive map-based assessment of land resources and development directions that were conducted at the forum provided a baseline for developing the Vision Statement.

II. DEMOGRAPHIC PROFILE

A. Population Characteristics

The population of Ashburnham represents only 3% of the regional population, at 5,546 residents in 2000. Population growth was significant between 1980 and 1990, as the town added 1,358 people, increasing from 4,075 to 5,433 (a 33% increase. Since 1999, the population growth rate dropped considerably, increasing by only 2.1% as the own added another 113 people.

In contrast, the Montachusett Region grew rapidly from 1980 to 1990 adding 21,440 people at a growth rate of 11%. The growth continued between 1990 and 2000, though at a much slower rate of nearly 6%, adding another 12,434 people for a final population in 2000 of 228,005. Most of the regional growth occurred in communities near I-495 and I-190. In raw numbers, Leominster, Groton, Gardner, Winchendon, Harvard, and Hubbardston were the towns that grew the most, each adding well over two thousand new residents in the twenty-year period.

Population Changes in the Montachusett Region from 1980 to 2000

Community	Population			Change		Percent Change	
	1980	1990	2000	80-90	90-00	80-90	90-00
Ashburnham	**4,075**	**5,433**	**5,546**	**1,358**	**113**	**33.3%**	**2.1%**
Ashby	2,311	2,717	2,845	406	128	17.6%	4.7%
Athol	10,634	11,451	11,299	817	-152	7.7%	-1.3%
Ayer	6,991	6,837	7,287	-154	450	-2.2%	6.6%
Clinton	12,771	13,222	13,435	451	213	3.5%	1.6%
Fitchburg	39,580	41,194	39,102	1,614	-2,092	4.1%	-5.1%
Gardner	17,900	20,125	20,770	2,225	645	12.4%	3.2%
Groton	6,154	7,511	9,547	1,357	2,036	22.1%	27.1%
Harvard	3,744	4,448	5,981	704	1,533	18.8%	34.5%
Hubbardston	1,797	2,797	3,909	1,000	1,112	55.6%	39.8%
Lancaster	6,334	6,661	7,380	327	719	5.2%	10.8%
Leominster	34,508	38,145	41,303	3,637	3,158	10.5%	8.3%
Lunenburg	8,405	9,117	9,401	712	284	8.5%	3.1%
Petersham	1,024	1,131	1,180	107	49	10.4%	4.3%
Phillipston	953	1,485	1,621	532	136	55.8%	9.2%
Royalston	955	1,147	1,254	192	107	20.1%	9.3%
Shirley	5,126	5,739	6,373	613	634	12.0%	11.0%
Sterling	5,440	6,481	7,257	1,041	776	19.1%	12.0%
Templeton	6,070	6,438	6,799	368	361	6.1%	5.6%
Townsend	7,201	8,496	9,198	1,295	702	18.0%	8.3%
Westminster	5,139	6,191	6,907	1,052	716	20.5%	11.6%
Winchendon	7,019	8,805	9,611	1,786	806	25.4%	9.2%
Total	**194,131**	**215,571**	**228,005**	**21,440**	**12,434**	**11.0%**	**5.8%**

Source: US Decennial Census

B. Age Distribution

The age distribution data from the US Census for 1980, 1990, and 2000, coupled with the MISER population projections for 2010 and 2020, illustrate an aging trend that reflects the general demographics of the baby boom generation, the subsequent dearth of babies (known as Generation X), and the boomlet that represents the children of the "Baby Boomers". With each passing decade, the age distribution curve and the curve showing the change in populations in each age group point to a population that, while growing, is also aging in place.

In general, the 1980 age distribution showed the greatest percentages of the population were between the ages of 15 and 24, representing those who were born from 1955 to 1964. The oldest were born in the 1890's and represented only a fraction of a percent of the population. By 1990, the largest age groups had shifted to those between the ages of 25 and 34 and their numbers represented a still greater share of the total population. This is in part because older generations had either left town or were no longer living, and in part because young families were moving to the town. By 2000 the age groups with the greatest percentage of the population had shifted to those between the ages of 35 and 44, still representing those born from 1950 to 1964. The trend is expected to continue through 2020, when these age cohorts will be between the ages of 50 and 64.

Twenty years behind this "Baby Boom" wave is a second wave of increased population: those born between the years of 1981 and 1996. By the time they hit their twenties, they are expected to hold an increasing share of the population, potentially indicating young adults seeking affordable homes in the region as well as those remaining in their parents' homes because of the lack of affordable homes in the region. The population projections did not seem to consider the tendency for age groups from 15 to 25 to level off due to college age residents leaving for school. This should be factored in when considering housing, recreation and open space needs for the region.

Since 1980, the population of Ashburnham has grown increasingly older, possibly indicating a trend of aging in place. Changes in age cohorts for children and young adults, by comparison, have remained relatively stable, and typically show a patterns of young adults leaving between the ages of 19 and 24. These trends point to a need to focus planning efforts toward the needs of this older population, recognizing the types of recreation they are likely to engage in, the types of housing needs they will have, and the levels of income that will support the community in achieving these needs.

Population numbers and estimates are represented as points on a distribution curve for each decade. These curves show a bulge in the age cohorts that shifts to the right with each passing decade, finally leveling off after age 80 for all decades. Note how the age distribution peaks shift to the right with each passing decade. Note the significant trough that follows this bulge, and the subsequent lesser bulge that represents the "children of the baby boom" who are now having children. Note also that the tail end of the baby boom generation is still in child bearing age and many have deferred having children until their late 30's and early 40' to pursue careers. The shift of the age distribution curve describes a population that is aging in place, or perhaps to a town that is affordable only to those who have significantly higher incomes, and greater equity investments.

C. Working Age Population

The region grew at a rate of 1.8% from 1990 to 2000.

	1980 Census	Working Age Population 1980	1990 Census	Working Age Population 1990	2000 Census	Working Age Population 2000
Ashburnham	**4,075**	**2,667**	**5,433**	**3,619**	**5,546**	**4,192**
Ashby	2,311	1,490	2,717	1,770	2,845	1,926
Athol	10,634	6,467	11,451	6,034	11,299	7,022
Ayer	6,993	4,874	6,871	4,738	7,287	4,985
Clinton	12,771	8,290	13,222	8,703	13,435	8,798
Fitchburg	39,580	26,097	41,194	26,304	39,102	24,897
Gardner	17,900	11,405	20,125	12,813	20,770	13,288
Groton	6,154	3,982	7,511	5,204	9,547	6,179
Harvard	3,744	8,838	12,329	8,952	5,981	4,188
Hubbardston	1,797	1,167	2,797	1,868	3,909	2,600
Lancaster	6,334	4,170	6,661	4,711	7,380	5,307
Leominster	34,508	22,818	38,145	25,603	41,303	26,730
Lunenburg	8,405	5,746	9,117	6,123	9,401	6,275
Petersham	1,024	642	1,131	734	1,180	867
Phillipston	953	595	1,485	1,001	1,621	1,108
Royalston	955	591	1,147	699	1,254	835
Shirley	4,712	3,509	6,118	4,324	6,373	4,601
Sterling	5,440	3,559	6,481	4,412	7,257	5,262
Templeton	6,070	3,945	6,438	4,181	6,799	4,442
Townsend	7,201	4,647	8,496	5,552	9,198	6,298
Westminster	5,139	3,455	6,191	4,150	6,907	4,639
Winchendon	7,019	4,343	8,805	5,457	9,611	6,208
Totals	193,719	133,297	223,865	146,952	228,005	150,647

D. Gender

According to the 2000 census, the region's population is divided approximately evenly between males and females.

	1990			2000		
Community	**Population**	**Female**	**Male**	**Population**	**Female**	**Male**
Ashburnham	**5,433**	**2,665**	**2,768**	**5,546**	**2729**	**2817**
Ashby	2,717	1,371	1,346	2,845	1417	1428
Athol	11,451	5,912	5,539	11,299	5830	5469
Ayer	6,871	3,545	3,326	7,287	3702	3585
Clinton	13,222	6,931	6,291	13,435	6963	6472
Fitchburg	41,194	21,664	19,530	39,102	20443	18659
Gardner	20,125	10,055	10,070	20,770	10125	10645
Groton	7,511	3,749	3,762	9,547	4816	4731
Harvard	12,329	5,191	7,138	5,981	2662	3319
Hubbardston	2,797	1,380	1,417	3,909	1932	1977
Lancaster	6,661	3,375	3,286	7,380	3268	4112
Leominster	38,145	19,718	18,427	41,303	21443	19860
Lunenburg	9,117	4,596	4,521	9,401	4746	4655
Petersham	1,131	591	540	1,180	586	594
Phillipston	1,485	722	763	1,621	806	815
Royalston	1,147	558	589	1,254	605	649
Shirley	6,118	2,886	3,232	6,373	2680	3693
Sterling	6,481	3,243	3,238	7,257	3645	3612
Templeton	6,438	3,206	3,232	6,799	3382	3417
Townsend	8,496	4,286	4,210	9,198	4637	4561
Westminster	6,191	3,131	3,060	6,907	3462	3445
Winchendon	8,805	4,461	4,344	9,611	4845	4766
Total	223,865	113,236	110,629	228,005	114724	113281
% of Popula-tion		50.6%	49.4%		50.3%	49.7%

E. Race

In keeping with the national trends, the population of the Montachusett Region is becoming more diverse in its racial and ethnic makeup. Minority racial and ethnic groups continue to be one of the fastest growing population segments in the region.

	1980			1990			2000		
Community	**Total Population**	**White**	**Minorities**	**Total Population**	**White**	**Minorities**	**Total Population**	**White**	**Minorities**
Ashburnham	**4075**	**4051**	**24**	**5433**	**5414**	**19**	**5546**	**5416**	**130**
Ashby	2311	2294	17	2717	2707	10	2845	2789	56
Athol	10634	10555	79	11451	11136	315	11299	10884	415
Ayer	6993	6067	926	6871	5702	1169	7287	6261	1026
Clinton	12771	12169	602	13222	12395	827	13435	11849	1586
Fitchburg	39580	38269	1311	41194	36935	4259	39102	32007	7095
Gardner	17900	17737	163	20125	19290	835	20770	19343	1427
Groton	6154	6058	96	7511	7312	199	9547	9282	265
Harvard	12170	10496	1674	12329	10201	2128	5981	5484	497
Hubbardston	1797	1776	21	2797	2771	26	3909	3846	63
Lancaster	2329	1991	338	6661	5969	692	7380	6237	1143
Leominster	34508	33347	1161	38145	35469	2676	41303	35982	5321
Lunenburg	8405	8283	122	9117	8995	122	9401	9120	281
Petersham	1024	1019	5	1131	1110	21	1180	1147	33
Phillipston	953	952	1	1485	1479	6	1621	1584	37
Royalston	955	938	17	1147	1142	5	1254	1237	17
Shirley	5124	4638	486	6118	5329	789	6373	5347	1026
Sterling	5440	5401	39	6481	6443	38	7257	7116	141
Templeton	6070	6049	21	6438	6340	98	6799	6673	126
Townsend	7201	7126	75	8496	8281	215	9198	8972	226
Westminster	5139	5107	32	6191	6030	161	6907	6734	173
Winchendon	7019	6985	34	8805	8660	145	9611	9223	388
Total	198552	191308	7244	223865	209110	14755	228005	206533	21472

F. Median Household Income

Regionwide the median household income (MHI) rose 40.4%.

Community	Median Household Income (1990)	Median Household Income (2000)	Percent Change: 1990 to 2000
Ashburnham	**$42,442**	**$55,568**	**30.9%**
Ashby	$46,250	$61,000	31.9%
Athol	$27,094	$33,475	23.6%
Ayer	$29,326	$46,619	59.0%
Clinton	$34,091	$44,740	31.2%
Fitchburg	$27,101	$37,004	37%
Gardner	$28,035	$37,334	33.2%
Groton	$55,169	$82,869	50.2%
Harvard	$47,299	$107,934	128.2%
Hubbardston	$42,650	$61,462	44.1%
Lancaster	$41,552	$60,752	46.2%
Leominster	$35,974	$44,893	24.8%
Lunenburg	$43,199	$56,812	31.5%
Petersham	$39,063	$47,833	22.5%
Phillipston	$35,573	$46,845	31.7%
Royalston	$33,333	$44,444	33.3%
Shirley	$38,377	$53,334	39.0%
Sterling	$49,345	$67,188	36.2%
Templeton	$34,395	$48,482	41.0%
Townsend	$46,910	$61,745	31.6%
Westminster	$46,292	$57,755	24.8%
Winchendon	$32,362	$43,750	35.2%
Montachusett Region Avg.	$38,901	$54,629	40.4%
Middlesex County		$60,821	
Worcester County	$35,774	$47,874	33.8%
State Avg.	$36,952	$50,502	36.7%
National Avg.	$30,056	$41,994	39.7%

G. Median Family Income

Community	Median Family Income (1990)	Median Family Income (2000)	Percent Change: 1990 to 2000
Ashburnham	**$45,359**	**$58,993**	**30.1%**
Ashby	$49,310	$64,900	31.6%
Athol	$33,263	$4,1061	23.4%
Ayer	$32,939	$61,968	88.1%
Clinton	$40,139	$53,308	32.8%
Fitchburg	$33,357	$43,291	29.8%
Gardner	$35,430	$47,164	33.1%
Groton	$60,000	$92,014	53.4%
Harvard	$47,481	$119,352	151.4%
Hubbardston	$46,853	$66,058	41.0%
Lancaster	$46,924	$66,490	41.7%
Leominster	$41,927	$54,660	30.4%
Lunenburg	$49,625	$63,981	28.9%
Petersham	$45,855	$58,125	26.8%
Phillipston	$40,069	$52,011	29.8%
Royalston	$36,923	$51,818	40.3%
Shirley	$43,372	$66,250	52.7%
Sterling	$53,339	$76,943	44.3%
Templeton	$38,074	$52,936	39.0%
Townsend	$50,629	$67,173	32.7%
Westminster	$51,986	$61,835	18.9%
Winchendon	$35,828	$50,086	39.8%
Montachusett Region Avg.	$43,576	$62,297	43.0%
Middlesex County		$74,194	
Worcester County	$42,057	$58,394	38.8%
State Avg.	$44,367	$61,664	39.0%
National Avg.	$35,225	$50,046	42.1%

H. Per Capita Income

In the year 2000 region wide per capital income rose 31.5% from 15,526 in 1990 to $20,417 in 2000.

Community	Per Capita Income (1990)	Per Capita Income (2000)	Percent Change: 1990 to 2000
Ashburnham	**$15,595**	**$21,659**	**38.9%**
Ashby	$16,611	$21,648	30.3%
Athol	$12,444	$16,845	35.4%
Ayer	$14,586	$26,400	81.0%
Clinton	$15,328	$22,764	48.5%
Fitchburg	$12,140	$17,256	42.1%
Gardner	$13,207	$18,624	41.0%
Groton	$22,832	$33,877	48.4%
Harvard	$17,397	$40,867	134.9%
Hubbardston	$15,575	$23,072	48.1%
Lancaster	$14,619	$21,010	43.7%
Leominster	$15,960	$21,769	36.4%
Lunenburg	$19,166	$26,986	40.8%
Petersham	$17,542	$24,222	38.1%
Phillipston	$13,216	$18,706	41.5%
Royalston	$12,421	$18,297	47.3%
Shirley	$15,581	$20,556	31.9%
Sterling	$17,830	$28,844	61.8%
Templeton	$13,347	$21,994	64.8%
Townsend	$15,694	$22,658	44.4%
Westminster	$16,798	$24,913	48.3%
Winchendon	$13,143	$18,798	43.0%
Montachusett Region Avg.	$15,501	$23,262	50.1%
Middlesex County		$31,199	
Worcester County	$15,500	$22,983	48.3%
State Avg.	$17,224	$25,925	50.5%
National Avg.	$14,420	$21,587	49.7%

I. Poverty

Region-wide there was a decline in poverty from 1990 to 2000 of 14.3%. The poverty rates declined in nine of the twenty-two communities in the Montachusett Region.

Community	Town Populations 1990	Number Below Poverty	Percent Below Poverty	Town Populations 2000	Number Below Poverty	Percent Below Poverty	Percent Change 1990 to 2000
Ashburnham	**5,433**	**332**	**6.2%**	**5546**	**350**	**6.40%**	**94.9%**
Ashby	2,717	68	2.5%	2845	143	5.10%	47.6%
Athol	11,451	1,312	11.7%	11299	1038	9.40%	126.4%
Ayer	6,871	596	8.7%	7287	765	10.80%	77.9%
Clinton	13,222	980	7.5%	13435	949	7.10%	103.3%
Fitchburg	41,194	5,461	14.0%	39102	5627	15%	97.0%
Gardner	20,125	2,092	11.0%	20770	1863	9.60%	112.3%
Groton	7,511	286	3.8%	9547	376	4%	76.1%
Harvard	12,329	373	3.0%	5981	106	2%	351.9%
Hubbardston	2,797	111	4.0%	3909	143	3.70%	77.6%
Lancaster	6,661	306	5.5%	7380	237	4.10%	129.1%
Leominster	38,145	2,713	7.2%	41303	3889	9.50%	69.8%
Lunenburg	9,117	322	3.5%	9401	382	4.10%	84.3%
Petersham	1,131	61	5.8%	1180	66	5.80%	92.4%
Phillipston	1,485	114	7.7%	1621	93	5.80%	122.6%
Royalston	1,147	72	6.3%	1254	109	8.70%	66.1%
Shirley	6,118	272	4.4%	6373	172	3.30%	158.1%
Sterling	6,481	299	4.6%	7257	213	2.90%	140.4%
Templeton	6,438	284	4.6%	6799	588	9.10%	48.3%
Townsend	8,496	256	3.0%	9198	464	5.10%	55.2%
Westminster	6,191	274	4.4%	6907	212	3.10%	129.2%
Winchendon	8,805	790	9.1%	9611	953	10.00%	82.9%
Montachusett Region Avg.	223,865	17,374	7.8%	10363.864	851.7273	0.06573	92.7%
Middlesex County				1465396	92705	6.50%	0.0%
Worcester County	709,705	56,617	8.0%	750963	67136	9.20%	84.3%
State Avg.	6,016,425	519,339	8.6%	6349097	573421	9.30%	90.6%
National Avg.	248,709,873	31,742,864	12.8%	281421906	33899812	12.40%	93.6%

J. Educational Attainment

Town/City	High School Graduate (includes equivalency)	1990 Percentage	2000 High School Graduate (in-	2000 Percentage	1990 Bachelor's Degree	1990 Percentage	2000 Bachelor's Degree	2000 Percentage	1990 Graduate or Professional degree	1990 Percentage	2000 Graduate or Professional degree	2000 Percentage
Ashburnham	**1090**	**28.43%**	**1181**	**33.00%**	**561**	**14.63%**	**613**	**17.10%**	**354**	**9.23%**	**322**	**9.00%**
Ahby	753	39.59%	661	35.40%	225	11.83%	291	15.60%	115	6.05%	186	10.00%
Athol	3492	41.94%	3025	40.30%	603	7.24%	678	9.00%	331	3.98%	318	4.20%
Ayer	2113	40.51%	210	23.6%	553	10.60%	291	15.6%	157	3.01%	186	10%
Clinton	3713	35.62%	623%	20.6%	1200	11.51%	1294	13.8	444	4.26%	869	9.3%
Fitchburg	10626	33.96%	2326	20.5%	2410	7.70%	2326	9.4	1203	3.84%	1505	6.1%
Gardner	4749	30.48%	1234	23.5%	1522	9.77%	1468	10.3%	598	3.84%	708	5%
Groton	1233	22.61%	524	17.8%	1284	23.55%	1841	30.4	795	14.58%	1415	23.4%
Harvard	2728	30.70%	424	25%	1606	18.07%	1197	29.1%	1192	13.41%	1478	36
Hubbardston	651	33.52%	194	16.7%	263	13.54%	668	26.7%	125	6.44%	179	7.1%
Lancaster	1428	27.70%	528	25	795	15.42%	943	18.9%	382	7.41%	601	12%
Leominster	9440	32.20%	2480	23.1%	3672	12.53%	3891	14%	1651	5.63%	2208	7.9%
Lunenburg	2373	35.16%	593	21.5%	1106	16.39%	1257	19.4%	521	7.72%	781	12.1%
Petersham	211	23.87%	200	23.20%	195	22.06%	192	22.30%	149	16.86%	204	23.70%
Phillipston	424	40.89%	106	23.3%	89	8.58%	107	10.1%	61	5.88%	64	6.1%
Royalston	259	32.29%	282	35.90%	97	12.09%	75	9.50%	41	5.11%	60	7.60%
Shirley	1397	30.76%	423	28.7%	569	12.53%	596	13.2%	225	4.95%	290	6.4%
Sterling	1154	25.19%	391	20.6	885	19.31%	1153	23.6%	486	10.61%	598	12.2%
Templeton	1799	37.64%	387	21.2%	281	5.88%	416	9.1%	189	3.95%	206	4.5%
Townsend	1839	32.39%	1600	28.10%	1029	18.13%	1170	20.50%	272	4.79%	438	7.70%
Westminster	1423	31.64%	410	21.8%	725	16.12%	891	19.2%	324	7.20%	432	9.3%
Winchendon	2283	37.26%	681	24.7%	470	7.67%	540	8.9%	262	4.28%	261	4.3%
Regional totals	55178	33.04%	6949		20140	12.06%	3019		9877	5.91%	1528	
Regional Percentages	33.04%		4.16%		12.06%		1.81%		5.91%		0.91%	
Massachusetts	1390157		1165489	27.30%	746818		834554	19.50%	427284		583741	13.70%
United States	55769325		52168981	28.60%	22709074		28317792	15.50%	11593019		16144813	8.90%

K. Employment by SIC

Businesses with the highest number and concentration in the Montachusett Region include Services (31.3%), Retail Trade (16.3%), Construction (10.5%), Finance, Insurance and Real Estate (6.3%), and Manufacturing (6.1%).

Community	Year	Agric, Forest, Fish	Mining	Const	Mfg	Trans Com, Util	Whlsl & Retail	Finance, Insurance, RE	Services Public Admin	*Total	% of Total
Ashburnham	**1990**	**25**	**0**	**124**	**766**	**96**	**508**	**210**	**994**	**2,723**	**2.59%**
	2000	**8**	**7**	**216**	**601**	**46**	**343**	**113**	**1,506**	**2,840**	**2.65%**
Ashby	1990	37	0	155	408	73	290	22	440	1,425	1.35%
	2000	23	0	123	269	79	265	30	671	1,460	1.36%
Athol	1990	64	0	252	1,609	222	906	187	1,561	4,801	4.56%
	2000	8	0	230	1,626	164	702	246	2,037	5,013	4.68%
Ayer	1990	10	0	132	905	238	675	142	1,232	3,334	3.17%
	2000	14	0	192	951	172	584	181	1,725	3,819	3.56%
Clinton	1990	70	16	515	2,345	304	1,208	290	2,147	6,895	6.55%
	2000	22	0	349	1,723	237	926	404	2,959	6,620	6.17%
Fitchburg	1990	130	6	1,029	4,821	852	3,973	766	6,371	17,948	17.06%
	2000	26	0	758	4,086	534	2,899	763	7,911	16,977	15.83%
Gardner	1990	21	0	325	2,801	422	1,758	339	3,098	8,764	8.33%
	2000	6	16	475	2,571	292	1,338	430	4,221	9,349	8.72%
Groton	1990	125	0	180	1,229	112	658	166	1,560	4,030	3.83%
	2000	8	0	225	887	174	660	242	2,424	4,620	4.31%
Harvard	1990	67	0	146	776	96	619	200	1,694	3,598	3.42%
	2000	65	0	70	498	20	313	184	1,416	2,566	2.39%
Hubbardston	1990	61	5	138	396	62	208	57	495	1,422	1.35%
	2000	21	0	182	472	76	224	117	932	2,024	1.89%
Lancaster	1990	77	0	172	754	115	608	101	1,566	3,393	3.22%
	2000	5	0	250	674	91	382	153	1,511	3,066	2.86%
Leominster	1990	115	15	948	6,065	863	4,476	1,061	5,990	19,533	18.57%
	2000	91	0	1,045	5,148	619	2,993	999	8,685	19,580	18.26%
Lunenburg	1990	83	21	314	1,245	352	1,089	189	1,567	4,860	4.62%
	2000	21	7	375	817	254	686	315	2,184	4,659	4.34%
Petersham	1990	15	0	57	81	41	103	22	247	566	0.54%
	2000	17	0	33	73	9	56	21	374	583	0.54%
Phillipston	1990	21	0	54	181	58	140	33	230	717	0.68%
	2000	22	0	67	200	15	150	21	357	832	0.78%
Royalston	1990	9	0	30	170	22	100	15	167	513	0.49%
	2000	20	0	52	142	21	64	18	259	576	0.54%
Shirley	1990	0	5	167	976	140	424	169	899	2,780	2.64%
	2000	4	0	205	609	131	351	143	1,260	2,703	2.52%

Sterling	1990	34	0	225	880	204	648	281	1,024	3,296	3.13%
	2000	29	0	271	838	124	516	211	1,872	3,861	3.60%
Templeton	1990	54	0	187	874	216	608	96	1,032	3,067	2.92%
	2000	21	0	203	702	126	850	171	1,437	3,510	3.27%
Townsend	1990	57	0	209	1,517	172	898	198	1,322	4,373	4.16%
	2000	23	0	456	1,108	110	719	238	2,051	4,705	4.39%
Westminster	1990	45	0	190	824	237	726	91	1,047	3,160	3.00%
	2000	70	0	193	872	206	494	200	1,452	3,487	3.25%
Winchendon	1990	32	0	241	1,295	165	659	145	1,477	4,014	3.82%
	2000	20	0	394	1,342	116	599	146	1,760	4,377	4.08%
Total	*1990*	*1,152*	*68*	*5,790*	*30,918*	*5,062*	*21,282*	*4,780*	*36,160*	*105,212*	
	2000	*544*	*30*	*6,364*	*26,209*	*3,616*	*16,114*	*5,346*	*49,004*	*107,227*	

Source: U. S. Census, 1990 and 2000

Services include: businsess & repair, personal, entertainment & recreation, health, educational and other professional.

L. Unemployment Rates – Annualized

Annualized Unemployment Rates: 1990 - 2003														
	1990	1991	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**
Ashburnham	**8.2%**	**10.8%**	**8.3%**	**6.5%**	**6.0%**	**6.0%**	**5.4%**	**5.1%**	**3.6%**	**3.7%**	**3.0%**	**4.7%**	**6.8%**	**7.4%**
Ashby	6.4%	10.2%	7.6%	4.5%	4.8%	4.6%	5.0%	4.2%	3.3%	3.9%	2.6%	3.6%	5.8%	6.8%
Athol	9.6%	14.9%	13.6%	10.0%	8.6%	7.8%	6.7%	6.9%	5.6%	5.3%	4.3%	6.3%	8.3%	10.0%
Ayer	6.4%	9.7%	8.8%	7.9%	7.2%	6.0%	4.4%	3.4%	3.2%	3.3%	2.2%	4.0%	5.9%	6.9%
Clinton	6.8%	10.3%	9.8%	7.9%	6.8%	6.4%	5.0%	3.6%	3.2%	3.7%	2.7%	4.3%	6.3%	7.0%
Fitchburg	8.9%	12.2%	10.5%	7.7%	n/a	6.1%	5.7%	4.0%	3.3%	3.2%	2.6%	3.7%	5.3%	n/a
Gardner	8.9%	12.5%	9.7%	7.1%	7.2%	6.9%	5.8%	5.3%	4.1%	4.3%	3.8%	5.8%	7.6%	8.1%
Groton	4.3%	7.1%	6.6%	4.8%	4.6%	3.8%	2.7%	2.7%	2.5%	2.4%	1.8%	3.0%	5.5%	4.9%
Harvard	3.6%	3.8%	3.8%	4.4%	3.4%	n/a	1.7%	1.7%	1.9%	2.0%	1.4%	2.6%	4.4%	7.8%
Hubbardston	6.8%	11.8%	10.4%	8.5%	8.3%	6.5%	6.7%	5.9%	5.4%	4.6%	3.7%	5.8%	n/a	7.9%
Lancaster	4.6%	6.6%	6.2%	4.8%	5.0%	4.8%	3.3%	3.2%	2.3%	2.5%	2.1%	3.4%	4.9%	5.2%
Leominster	7.2%	10.3%	8.6%	7.3%	6.7%	6.4%	5.2%	4.6%	3.9%	4.0%	3.3%	4.9%	7.1%	7.3%
Lunenburg	5.5%	8.8%	7.1%	6.5%	5.3%	5.0%	4.3%	4.1%	3.0%	3.4%	3.0%	3.9%	6.4%	6.8%
Petersham	3.8%	8.4%	8.3%	6.2%	5.7%	5.2%	3.3%	4.8%	2.9%	3.5%	3.3%	n/a	5.5%	6.0%
Phillipston	n/a	9.6%	10.3%	7.3%	11.1%	8.1%	7.2%	6.4%	n/a	7.0%	5.2%	6.8%	10.1%	7.7%
Royalston	4.9%	10.6%	5.8%	7.6%	7.5%	5.4%	4.9%	4.4%	4.5%	4.1%	3.6%	6.4%	9.6%	9.1%
Shirley	5.9%	8.2%	6.6%	5.4%	5.0%	4.4%	3.5%	2.9%	2.7%	2.8%	1.8%	3.5%	5.0%	6.3%
Sterling	5.2%	8.3%	8.8%	6.8%	5.5%	5.0%	3.3%	3.4%	2.3%	3.1%	2.1%	3.2%	5.5%	5.8%
Templeton	8.1%	11.7%	10.3%	7.2%	6.9%	6.5%	4.3%	5.3%	4.3%	4.3%	3.9%	4.8%	7.0%	8.4%
Townsend	4.9%	7.6%	7.0%	5.8%	4.8%	4.7%	3.7%	3.5%	2.6%	3.0%	2.1%	3.3%	5.2%	5.7%
Westminster	8.5%	9.8%	8.8%	6.6%	6.4%	5.3%	4.3%	3.8%	3.4%	3.8%	3.2%	4.2%	7.0%	7.2%
Winchendon	7.7%	10.8%	n/a	n/a	6.9%	7.7%	5.7%	n/a	4.1%	3.9%	3.4%	4.3%	7.7%	7.6%
Montachusett Region	6.2%	9.7%	8.0%	6.4%	6.1%	5.6%	4.6%	4.1%	3.3%	3.7%	3.0%	4.2%	6.2%	6.8%
Middlesex County	4.9%	7.3%	7.3%	5.7%	4.9%	4.3%	3.2%	3.0%	2.5%	2.5%	1.9%	3.1%	4.9%	5.1%
Worcester County	6.7%	10.0%	8.9%	6.8%	5.6%	5.3%	4.3%	4.0%	3.4%	3.4%	2.9%	4.1%	6.1%	6.7%
Massachusetts	6.0%	9.1%	n/a	6.9%	6.0%	5.4%	4.3%	4.0%	3.3%	3.2%	2.6%	3.7%	5.3%	5.8%
U.S.	5.6%	6.8%	n/a	6.9%	6.1%	5.6%	5.4%	4.9%	4.5%	4.2%	4.0%	4.7%	5.8%	n/a

M. Buildout Analysis

In 2000, The Executive Office of Environmental Affairs (EOEA) sponsored the creation of buildout analyses for all 351 towns and cities within the Commonwealth of Massachusetts in support of the Community Preservation Act. At the local level, EOEA believes that Community Preservation is about maintaining quality of life in our municipalities by empowering cities and towns to preserve what is important to their individual character.[1]

Buildout analyses illustrate the maximum development permitted as-of-right by the local zoning bylaws currently in place. The buildout provides an estimate of the total number of houses and commercial/industrial square footage that could result if every piece of unprotected, buildable land is developed, if no more land is permanently protected within a community, and if zoning remains unchanged. The buildout can provide insight to the potential burdens on community infrastructure. Using a projected growth rate based upon past growth trends, population forecasts and

[1] http://commpres.env.state.ma.us/content/buildout.asp

economic forecasts, communities can anticipate the length of time needed to reach buildout and to reach certain growth thresholds, such as when additional schools, water supplies and sewer systems will be needed. This information can provide a framework for planning future community budgets, as well.

The methodology defines buildable land as undeveloped, unprotected, upland that does not include transmission lines or land within 100 feet of a stream or river. The analysis reflects a community's zoning bylaws and regulations, especially concerning the way they treat resource areas such as wetlands and floodplains. If wetland areas can be included in gross building lot area minimums, then wetlands are not considered an absolute constraint to development. Yet wetlands may be considered partial constraints if they restrict the density or type of development in a given area. For example, there may be a 25% limit on all impervious surfaces on parcels located within a certain distance of a wetland. The methodology takes this into account.

Ashburnham's buildout analysis, which was prepared by the Montachusett Regional Planning Commission in 2000, treated the Wetland and Watershed District and the 0-100 foot Rivers Protection Act buffer as absolute constraints to development. Partial constraints to development included wetlands and the Water Supply Protection District. It was assumed that wetland areas yielded 90% of the development potential of un-constrained areas. Within the Water Supply Protection District, commercial and industrial uses are prohibited and residential uses are permitted on lots of at least 90,000 square feet.

The Ashburnham buildout analysis revealed a total of 17,355 acres of residentially zoned developable land in Ashburnham under current land use controls. Given existing zoning and use controls for commercial and industrial uses the town has potential for 17,635,539 square feet of floor area. If the town builds out under current land use controls, citizens can expect to see new housing units at buildout. The population can be expected to increase by 26,203. If current family-size trends are extended, the student population would increase by 5,459. Total water demand would increase by 3,287,914 Million gallons per day (an increase of nearly 1500%)[2].

Currently, Ashburnham has 97 miles of roads, most of which are under local jurisdiction. At buildout the total road miles would more than double, increasing by 214 miles to a total of 311 miles. Most of these roads would be created to accommodate new housing and subdivisions, placing them under the jurisdiction of the local communities.

Buildout Impact for Ashburnham

Buildout Impact for Ashburnham	Current	Additional Impact	Future Total
Population	5,546	26,203	31,749
Students	1,161	5,459	6,535
Households/dwelling Units	2,111	9,925	12,036
Residential Developable Land Area (sq. ft.)		755,985,166	
Residential Developable Land Area (acres)		17,355	
Commercial/Industrial Buildable Floor Area (sq. ft.)		17,635,539	
Potential Employment		36,806	
Water Demand (gallons per day)	224,000	3,287,914	3,511,914
Residential Water Use (gallons/day)		*1,965,248*	
Comm./Ind. Water Use (gallons/day)		*1,322,665*	
Municipal Solid Waste (tons/year)		13,442	
Non-Recycled Solid Waste (tons/year)		*9,559*	
Recyclable Solid Waste (tons/year)		*3,883*	
Road Miles	97	214	311

Source: EOEA Buildout Analysis

It is important to note that the buildout analysis describes Ashburnham's final development phase; it does not attempt to determine the rate of future development or pinpoint the precise year that buildout will be achieved. Ash-

[2] Note that the current water demand estimate is based upon a formula specified by the buildout methodology.

burnham's rate of development is influenced by a number of disparate factors, including regional and national market conditions. Therefore, it is virtually impossible to accurately predict the speed at which the town will grow. However, historic rates of development and trends, as documented in building permit records, population forecasts and economic forecasts, may provide insight into future development rates, at least in the near term. This can help Ashburnham anticipate the length of time needed to reach certain growth thresholds, such as when additional schools, water supplies and sewer system expansions will be needed. This information is key to planning future municipal budgets.

Though the buildout analysis results may be alarming, they represent an opportunity for the citizens of Ashburnham to critically assess the Town's future and determine if it is desirable. If it is not desirable, then adjustments can be made to current zoning and land use practices so as to yield a scheme that better conforms to hopes and expectations.

III. HOUSING ELEMENT

The Town of Ashburnham, located in Northern Worcester County and bordering New Hampshire, was in a position where it was developed at a slower pace due to geographical isolation. In the past, this relative remoteness and lack of easy access to major highways has permitted Ashburnham to develop at a slower pace than communities to the east and south. However, this is changing. Ashburnham, like its neighbors has been discovered and is now attracting many new residents that are willing to travel long distances to work, in order to live in an environmentally attractive town where housing costs are more affordable than in other areas of the state.

On January 21, 2000, Governor Paul Cellucci issued Executive Order 418, a measure designed to help communities plan for new housing opportunities. The impetus for the Executive order was the Governor's commitment to creating housing opportunities for families and individuals across a broad range of incomes. The Governor stated "To keep our economy strong, we must expand the supply of housing that is affordable across a broad range of incomes. We need housing for parents making the transition form welfare to work. We need homes for police officers, the firefighters, and the teachers who want to live in the community where they work. We also need housing for young people who want to raise a family in the community where their families raised them."

Bringing communities together to plan for the future is not a simple task; it involves understanding and balancing the needs of residents of all ages and income levels, and even the future needs of those not born yet. Communities are unique, and each faces a unique set of challenges regarding future planning and development. Yet Ashburnham, like communities across the state is facing the challenge of increased housing needs. The outward movement of peoples from the population centers in the east to communities where housing prices are lower is exacerbating a housing crisis. The cost of housing has reached levels where, as in the Governors quote above, is making it impossible for residents to buy a house in the community in which they were raised.

A. Affordable Housing: the Big Picture

At a recent *Funders' Roundtable* held at the Boston Foundation in June 2003, all of the presenters agreed that "the housing situation is bleak, with the demand for affordable housing currently greater than the supply—and with future demand expected to easily outstrip the rate at which new units are being built."(FHLBBoston: TOOLS, No. 20).

The increasing number of households purchasing existing housing as second homes in the region means that formerly affordable units are being taken off the market and sitting empty for a large part of the year. The negative impact on available units increases housing costs for the states' permanent residents especially in the rural towns of the Montachusett Region.

The state has one of the least affordable housing markets in the country and a low rate of homeownership in many areas. Yet in the non-urban areas such as Ashburnham this is not the case. Still the demand for housing is outpacing the rate at which units are being built by 50%, and this affects Ashburnham as well as the rest of the region.

The cost of affordable housing in the northeast has increased approximately 9% per year since 1996. However, it appears that the cost of producing market rate housing has seen similar increases.

The *Funders' Roundtable* said that construction costs accounted for the majority of cost increases. Increased wages account for only a portion of the *construction* costs. The escalation costs of providing Workers' Compensation, health, and liability insurance are significantly driving up labor costs. A shortage of skilled tradesmen is also driving up construction costs, with available tradesmen working for large operations that focus on producing high-end, market rate housing and commercial projects.

Land acquisition costs are also increasing the cost of housing. Developers are paying premium prices for properties that are increasingly of poorer quality. This means developers often must invest more dollars in environmental remediation and infrastructure improvements.

For affordable-housing, as with any business, time equals money. Developers must usually overcome numerous delays. In many communities opposition to growth and high-density housing is "fierce." As a result, affordable housing developments frequently face legal challenges or require endless zoning board meeting and redesigns before construction can get underway. Meanwhile putting together multiple funding sources and meeting various regulations slows down the development process and increases costs.

1. Labor force and Housing

In an article in Massachusetts Benchmark, Summer 03 (Population Change, Housing, and Local Finance, Nakosteen and Palma, Vol. 6, Issue 2) the authors state, "There is broad agreement that affordable housing is one of the most pressing problems facing the Commonwealth. Attraction a qualified labor force to the state is challenging, since housing prices are high and rising quickly. Zone important aspect of increasi9ng the supply of housing in Massachusetts is the role played by municipal governments. In a sense, all housing development decisions in the state start at the municipal level. Many municipalities are reluctant to approve significant new housing projects because of the fear that the costs generated by new housing will outstrip the tax revenues generated." In fact they state that " the relationship between costs and revenues is not so clear-cut and deserves more consideration."

The interplay between population and the increase in the number of housing units explains some of this housing demand phenomenon. According to the U.S. Census Bureau, the population of the Commonwealth grew 5.5% between 1990 and 2000, compared to 13% nationwide. This might be expected to create a similar increase in housing units, but it did not. The number of housing units in Massachusetts increased only 6% in the decade of the 1990's; while the nation saw growth of over 13%, roughly equal to the national rate of population growth. If housing unit production had matched new unit growth in that period the state would have added over 70,000 more units than it did.

Over the past ten years, there has been a notable out-migration of people from Massachusetts to other states, most notable to other New England states. While good data on the reason for this movement are hard to obtain, many researchers believe that people are moving partly because of the tight housing market and the high cost of housing.

"The IRS tracks migration using tax return data. These data show that almost 119,000 people left the Commonwealth in 2000, including 26,000 to neighboring New England states. Over 93,000 moved out of New England entirely. (IBID, p.2) Previous migration research has been consistent in finding that young, better-skilled people are most likely to leave. They are generally in their twenties and thirties (as in Ashburnham), have a higher education and income characteristics than the overall population. As the Massachusetts economy triggers an outflow of migrant due to labor market conditions, it will be losing the best-educated of our young labor force.

As our workforce ages, the ability of our region to accommodate younger workers and their families becomes an increasingly critical economic issue. High tech and manufacturing businesses rely on younger workers to fill job ranks. Without a steady influx of new talent, these industries face a declining labor force. Other fields, including teaching, nursing, and public works and public safety, all rely on young workers to balance attrition due to retirements. The push to use early retirement in order to help fix the state budget exacerbates the situation. Regions across the state are experiencing serious shortages of nurses and teachers. Yet in spite of the need to encourage young workers to stay in Massachusetts, housing is unaffordable to many of these workers.

2. Ashburnham's Housing Situation

As Ashburnham grows into the future it is facing that challenge of increased housing needs. The town realizes that it has a responsibility to take a leadership role to implement steps to meet affordable housing needs. In an effort to address these needs the Town of Ashburnham has prepared this Community Development Housing Plan as a part of Executive Order 418, and to make future decisions regarding land-use and housing development.

In developing the housing component Ashburnham collected and analyzed available data, the census, the EOEA Buildout and other GIS tools related to the past, the current, and anticipated future population and the demand for housing. Using this information the town worked together to set goals, policies and proposals that will be included in this Community Development Housing Plan.

The Housing Element of the Ashburnham Community Development Plan will first assess and analyze housing related trends including population and housing unit growth, average household size, population by age group, age of housing stock, housing occupancy, and type of households. A housing demand assessment and needs analysis will also be conducted to document the demand for housing in Ashburnham, the housing needs of local residents and what is actually available (and affordable) for housing opportunities.

Findings from the housing assessment and analysis will be utilized to set Ashburnham's housing goal and objectives and develop recommendations that are designed to help fulfill them over the next 10 years and beyond. Based upon this information and coupled with open space and natural resources mapping, land use suitability for future development in the Town of Ashburnham will be identified and mapped and short-term and long-term numerical goals concerning housing unit production will be determined**.**

Most of the housing units in the Town of Ashburnham are moderately valued structures with an average assessed value of $127,200 in FY 2000 census. Newly constructed units over the past several years have been selling for as much as $400,000 and the asking price for one home was over $700,000 (in October 2003). This home was built in 1796 , on 20 acres and 3,750 square feet. The typical home "asking prices" in 2003 were well below this level ranging from two at $147,000 - $149,000 and 40 above $198,000. The home for $198,000 is 1600 square feet on 1.04 acres, built in 1990. The median sale asking price in October 2003 was $279,000. The Massachusetts Department of Housing and Community development figure based on median income of $60,900m that an affordable housing price for a home in Ashburnham, at 150% of median income is $299,759 and $199,839, for those at 100% of the median income. This is clearly too high for most of the residents or their children who may wish to purchase a home in their own community, where the median value for a home is $127,000. (Data from REALTOR.com).

Ashburnham is becoming a destination for migrants from Eastern Massachusetts who are in search of cheap land to build a large home

The following is from a real estate ad offered on REALTOR.com:

"About one hour northwest of Boston on a scenic road outside the center of the town of Ashburnham, the town has access to all the rich cultural and recreational amenities of the Boston and Worcester Metropolitan areas in Eastern Massachusetts. The north central Massachusetts location provides easy access to the Berkshire, New Hampshire, Vermont, New York and Connecticut. Cushing Academy, a fine private school, is in Ashburnham Center." "And the Milky Way is still visible at night."

A breakdown of the figures for the present valuation is an indication of this migration phenomenon. Considering the previous figures, the 2000 Census indicates that 93.2% of the assessed values of owner-occupied units are under $200,000. The median sales price is $172,950, compared to the median assessed value of $127,200.
Thus houses are selling at much higher values than other existing units, and the Town has become sensitized to the lack of new affordable housing that can address the needs of residents.

Average Construction Costs

Year	Single Family Units	Number of Units
2002	$115,483	47
2001	$118,279	28
2000	$107,420	32
1999	$111,649	39
1998	$107,438	28
1997	$111,811	32
1996	$125,068	24

Source: U.S. Department of Commerce, Bureau of the Census

These costs are well below the State's $299,759 affordable price of a single family home for middle income (150% of the median income) in Ashburnham (according to the Department of Housing and Community Development and

$199,839 for median income sales price is clearly too high most of the residents or their children who may wish to purchase a home in their own community. The median price for homes sold in 2002 was $200,000 which is well above the median for existing homes, $127,200. *Source:* The Warren Group

Existing Owner Occupied Units 2000

Valuation	Number of Units	Percent
Less than $49,000	16	1.1
$50,000 to $99,999	279	18.8
$100,000 to $149,000	710	47.9
$150,000 to $199,000	376	25.4
$200,000 to $299,000	94	6.3
$300,000 to $499,000	7	0.5
$500,000 to $999,000	-	-

Median - $127,000 Source: U.S. Department of Commerce, Bureau of the Census 2000

New housing units are valued higher than most other units in town, and the Town has become sensitized to the lack of new affordable housing that can address the needs of residents. Participation in a recent "Visioning Session" held by the MRPC for the Region helped to crystallize the needs of the region generally and show that Ashburnham isn't alone in its need for affordable housing. They look forward to complementing the efforts of neighboring communities in the region.

It is important for the community that they continue to be affordable to the residents now living in Ashburnham. This will be accomplished by encouraging a greater diversity of housing opportunities in order to meet the needs of a changing and diversified population with respect to age groups, persons in a household and income.

3. Montachusett Regional Housing Needs Assessment

The following towns and cities are a part of the Montachusett Region: Ashburnham, Ashby, Athol, Ayer, Fitchburg, Gardner, Groton, Harvard, , Lancaster, Leominster, Lunenburg, Petersham, Phillipston, Royalston, Shirley, Sterling, Westminster, and Winchendon.

The principal urban centers in the region are Fitchburg (39,100) and Leominster (41,300), and Gardner (20,770). These larger communities house a higher number of low and moderate-income families, and contain larger minority populations than the rest of the smaller towns in the region.

Regionally affordable housing is a major concern due to availability, and the high prices of homes and rental costs. In addition the increases in demand, spurred by the migration from more populace and expensive regions, and the lack of the development of affordable housing in the recent past, has resulted in a housing market that has created a great need for affordable housing. Adding the demand that is outstripping supply, a very low vacancy rate, and the increasing costs, and the region is faced with a critical situation.

The population in the Montachusett Region has increased modestly over the last decade by 12,434 or 5.77% (excluding the closing down of Fort Devens), and 37,398 or 19.62% since 1970, with the increase of 21,440 occurring in the decade of the 1980's. During this time the number of household units increased and the size of households decreased. This difference appears to be related to the increased number of single parent families in the region.

Owner-occupied units made up approximately 67 % of the total housing stock in the region compared to 66.2 % nationwide, 64.9% in New England, 61.7% in Massachusetts, and 88.9% in the Town of Ashburnham. The number of owner–occupied units in Ashburnham increased 20% over the period of the 1990's, from 68.9% to 88.9%. The median for the region is 82.8%. The owner occupied figure (88.9%) is higher than 17 of the 22 communities in the Montachusett Region, with Ashby having the highest number at 91.9%. This also indicates that 17 communities have more rental housing than Ashburnham. Much of the growth has taken place outside of the urban areas. Homebuyers are moving to the area from the east and the south where housing is more expensive and normally they tend to buy housing that is more expensive than existing housing.

Occupied Units 2000

Community	Units Occupied	Owner Occupied	%	Renter Occupied
Ashburnham	**1929**	**1714**	**88.9%**	**215**
Ashby	978	899	91.9%	79
Athol	4487	3156	70.33	1331
Ayer	2982	1661	55,7	1321
Clinton	5597	3028	54.1	2569
Fitchburg	14943	7708	51.16	7235
Gardner	8282	4520	54.57	3762
Groton	3268	2740	83.84	528
Harvard	1809	1638	90.55	171
Hubbardston	1308	1195	91.36	113
Lancaster	2049	1622	79.16	427
Leominster	16491	9545	57.88	6946
Lunenburg	3535	3085	87.3	450
Petersham	438	362	82.6	76
Phillipston	580	527	90.9	53
Royalston	449	393	87.5	56
Shirley	2067	1457	70.5	610
Sterling	2573	2186	85	387
Templeton	2411	1996	82.8	415
Townsend	3110	2624	84.4	486
Westminster	2529	2169	85.8	360
Winchendon	3447	2492	72.3	955

Source: U.S. Department of Commerce, Bureau of the Census 2000

Rental units accounted for 33% of the housing units in the region. Compared to 1990 there were 1,874 less units in 2000. The regional decline in rental units appears to be the result of the demolition of older sub-standard units in the urban centers, and the conversion of multi-family units to single family households. The state's vacancy rates overall have decreased over the decade of the 1990's. In 1990 the vacancy rate for year-round ownership units was 1.7%, and the 2000 rate decreased to .7%. The vacancy rate for year-round rental units in the Montachusett Region decreased dramatically from 6.9% in 1990 to 1.7% in 2000, reflecting a statewide need for housing.

Ashburnham's vacancy rate for ownership units, or units for sale increased slightly over the decade of the 1990's and is higher than the average for the State as a whole. The rental vacancy rate increased somewhat and is still lower than the State. Low availability of housing (1.3% and 1.8%) indicates that there should be a local demand for housing.

The problem is exacerbated by the number of vacant units that are for sale in the Montachusett Region. More than half of the vacant units are for sale, making the market vacancy rate less than 2.1%.

Vacancy Rates Massachusetts

	1990	2000
Ownership Units	1.7%	0.70%
Rental Units	6.90%	3.50%

Ashburnham

	1990	2000
Ownership Units	0.5%	1.0%
Rental Units	1.0%	1.8%

Source: U.S. Department of Commerce Bureau of the Census 1990 2000

The demand for both rental and owner-occupied housing has driven up the cost significantly over the last few years. Because of this demand, the private sector contractors have been concentrating on higher priced homes, which provide them with the greatest return on investment.

B. Housing Assessment and Analysis

1. Population Trends

The population of the Montachusett Region increased between 1960 and 2000 by 25.2%. In the last decade the population increased 6.1%. This compares to those growth communities throughout the region, although growth did not occur evenly.

The Town of Ashburnham, in the period from 1960 to 2000 had a population increase of 101% with a 33% increase during the 1980's,and a 2.1% increase between 1990 and 2000. In actual numbers of residents the increase was from 2,758 to 5,546, an overall increase of 2,788. This increase was exceeded by only 5 of 22 communities in the MRPC region. The median for the region was an increase of 51%. Thus most (16) communities grew at a slower rate than did Ashburnham. Seven communities exceeded 100% in growth and Hubbardston grew by 221%.

The Census for 2000 found that the average household unit size for the Montachusett Region was 2.50, a reduction of 5% from 1990. Ashburnham showed a small decrease from 2.95 in 1990, to 2.87 in 2000. Fifteen communities have experienced a reduction in the average unit size. If Harvard, which experienced the greatest reduction of population due to the elimination of Devens Military Base, is excluded, then the largest decrease in unit size was – 21% (Templeton). On the other hand the Towns of Lancaster and Ayer on the far eastern side of the region experienced a ten-year growth rate in unit size of 27%.

Population of Ashburnham

1960 - 2000

						Projected	Projected	'80-90' %	'90-00'%
Community	**1960**	**1970**	**1980**	**1990**	**2000**	**2010**	**2020**	**Change**	**Change**
Ashburnham	**2,758**	**3,484**	**4,075**	**5,433**	**5,546**	**5,993**	**6,658**	**33.3%**	**2.1%**

In the decade of the 1990's Ashburnham grew below the median of all other MRPC communities. In this ten-year period the population increased from 5,433 residents, to 5,546, an increase of 113 individuals or 2.1%. This increase is not reflected in the increase in housing units. From 1990 to 2000 the number of housing units decreased from 2,279 to 2,204, or 75 (3.3%) less units as the population increased by 113 or 2.1%. The decrease in households in recent years appears to be related to the "seasonal, recreational, an occasional use." In 1990, there were 307 (13.5%) of these units and in 2000 there were 207 (9.4%). This is a decrease of 4.1% or 100 units.

Ashburnham is a community well endowed with lakes and wooded land. There are 20 lakes, eight of significant size, that draw vacationers and part-time residents. The decrease in the number of these part time units appears to relate t the conversion of "summer camps" to year round residences. As the housing market tightened over the past two decades these units were rehabilitated and enlarged.

In addition, some of the camps and other houses had fallen into disrepair creating a hazard for local residents. The owners no longer paid their taxes, and at least eight units were taken by the town and demolished.

a) Median Age Distribution

The median age of communities in the Montachusett Region have changed significantly between 1980 and 2000. The median age grew by 7.6 years. From a regional average of 29.8 years in 1980, to 32.9 in 1990, and reaching 37.4 in 2000. This is a larger increase in the age of the population than the state as a whole. For full statistics on Montachusett Region see Demographics Section.

In the Town of Ashburnham began at a higher median age and increased from 30.4 years in 1980, to 32.9 years in 1990, up to 37.3 years in 2000. This 6.9 year increase in the age structure (22.7%) occurred as the population increased 33.3% in the 1980's and 2.1% in the 1990's. In this last decade the male to female ratio of population remained almost nearly the same, with 50.9% male, and 49.1% female in 1990 and 50.8% male and 49.2% female.

Median Age 1980 – 2000

	1980	1990	2000
Community	**Median Age**	**Median Age**	**Median Age**
Ashburnham	**30.4**	**32.9**	**37.3**

Source: U.S. Department of Commerce, Bureau of the Census 1980, 1990, 2000, June 2003.

b) Age of Residents

Between 1980 and 2000 the subset of residents from 60 - 74 years of age decreased 15%. The decreased numbers in this 60 – 74 category make up 10.3% of the total population. The other age group that lost was the 15 to 34 year category. This group lost 20.8% over that twenty year period. Looking at the population by age groups over time in Ashburnham it can be observed that side from the two previously mentioned groups all other age groups increased from 1980 to 2000.

c) Age Groups

Ashburnham Population by Age Groups

Ages	1980	1990	2000
Under 5	287	442	332
5 to 9	317	437	423
10 to 14	368	478	549
15 to 19	419	408	442
20 to 24	272	248	234
25 to 34	685	984	579
35 to 44	494	1077	1135
45 to 54	386	535	927
55 to 59	205	187	261
60 to 64	198	180	172
65 to 74	259	296	281
75 to 84	130	124	173
Over 85	47	37	38
Total Population	4075	5433	5546
% Increase	xxx	33.3%	2.1%

Source: U.S. Department of Commerce, Bureau of the Census 1980, 1990, 2000

2. Housing Unit Growth

a) Number of Dwelling Units

In 1980 Ashburnham had 1,849 dwelling units. The number of units increased 23.30% in the decade between 1980 and 1990, to 2,279 for a total of 430 units. This was more than increase of the period between 1990 and 2000 when unit numbers decreased 3.30% to 2,204 or 75 units. (This figure includes 207 units in the category of "for seasonal, recreational, or occasional use.) Based on household sizes the average of which we have seen earlier decreased from 2.95 to 2.87 persons/household in the 1990's, there was an increase of 113 residents, as units decreased. Census figures available show that the school aged population, 19 and under, decreased from 32.48% of the total population in 1990, to 23% in the year 2000, with approximately 1765 potential students. This is an increase in the actual number of students of only 19, but a decrease in the percent of student aged young people in the population. Thus the increase in median age of the community discussed earlier.

Between 1990 and 2000 the age group sub-sets that decreased were the 9 and under (-124), the 25 – 34 (-405) and the 60 – 74 years of age (-23). While the 25 to 34 age category decreased by 41%, or 405 individuals, the subset of 35 – 59 increased by 29.1%. Thus this age group increased from 33.1% of the population to 41.9% of the population. The other two categories that increased were the 10 to 14 year olds, by 71 individuals or 12.9% and the over 75 age group increased by 50 individuals or 31%.

Again, this relates to the increase in the median age of the community, from 30.4 years to 37. 3 years mentioned earlier.

Number of Dwelling Units

	Number of Dwelling Units			% Change	% Change
Community	**1980**	**1990**	**2000**	**'80-'90**	**'90-'00**
Ashburnham	**1,849**	**2,279**	**2,204**	**23.30%**	**-3.30%**
Ashby	802	959	1,011	19.60%	5.40%
Athol	4,212	4,840	4,824	14.90%	-0.30%
Ayer	2,802	2,891	3,154	3.20%	9.10%
Clinton	4,943	5,635	5,844	14.00%	3.70%
Fitchburg	15,347	16,665	16,002	8.60%	-4.00%
Gardner	7,477	8,654	8,838	15.70%	2.10%
Groton	2,249	2,774	3,393	23.30%	22.30%
Harvard	2,807	3,141	2,225	11.90%	-29.20%
Hubbardston	623	1,025	1,360	64.50%	32.70%
Lancaster	2,010	2,095	2,141	4.20%	2.20%
Leominster	12,988	15,533	16,976	19.60%	9.30%
Lunenburg	3,133	3,486	3,668	11.30%	5.20%
Petersham	364	448	474	23.10%	5.80%
Phillipston	304	631	739	107.60%	17.10%
Royalston	358	469	526	31.00%	12.20%
Shirley	1,829	2,183	2,156	19.40%	-1.20%
Sterling	1,793	2,308	2,637	28.70%	14.30%
Templeton	2,082	2,276	2,597	9.30%	14.10%
Townsend	2,404	2,894	3,184	20.40%	10.00%
Westminster	1,982	2,405	2,694	21.30%	12.00%
Winchendon	2,636	3,349	3,660	27.00%	9.30%
Total	74,994	86,940	90,307	15.90%	3.90%

Source: U.S. Department of Commerce, Bureau of the Census 1980, 1990, and 2000

b) Building Permits

Over the years since 1996 the number of building permits issued in Ashburnham has been up and down with an increased number issued in 2002. Beginning with 39 permits in 1999, and then dropping to 32 in 2000 and 28 in 2001, and then increasing in 2002 to 47, the largest number in recent years, and then going back to 37 in 2003. All new homes constructed in recent years were single family homes. Overall the trend for new permits increased by 267 homes since 1996.

Annual Number of Housing Units Authorized by Building Permits

Year	2003	2002	2001	2000	1999	1998	1997	1996
	37	47	28	32	39	28	32	24

Source: U.S. Department of Commerce, Bureau of the Census

In the 1980's 512 housing units were constructed, followed by another 199 in the 1990's. This growth of 711 units in 20 years expanded the housing stock by 32.2% over the units existent prior to 1980. The 621 housing units, near-

ly one third of the total stock of 2,204 units, plus those constructed after the year 2000 are considered to be relatively new and therefore are considered to be safer because they would be lead free.

Median Sales Price by Year

Year	One Family	Median Sales Price
2003	113	$209,000
2002	86	$172,950
2001	95	$156,000
2000	86	$125,000
1999	105	$106,000
1998	89	$104,000
1997	70	$95,000
1996	41	$93,000
1995	38	$112,000
1994	24	$72,300
1993	28	$90,000
1992	20	$104,500
1991	23	$107,500
1990	14	$108,500
1989	15	$129,900
1988	36	$130,000

Source: The Warren Group – Town Stats

3. Average Household Size

In the decade of the 1990's Ashburnham grew at 2.1% which is well below the median (6.1%) of all other MRPC communities. In this ten year period the population increased from 5,433 residents to 5,546 an increase of 113 individuals. This increase does not seem to be related to the decrease in housing units. From 1990 to 2000 the number of housing units decreased from 2,279 to 2,204 or 75 less units as the population increased by 113.

Ashburnham's housing stock has and continues to grow at a slower rate than its population. As mentioned earlier, this appears to be related to the conversion of camps to year-round housing, and the demolition of sub-standard housing. This should be the case when one considers the national trend towards smaller household sizes. Couples are having fewer children today and many households are the single parent variety. This would create a need for new housing with the increase of 113 residents in 75 less units, and Ashburnham's U.S. Census data appears to confirm this trend.

a) Persons/Unit

In the decade of the 90's the number of persons per unit in the Montachusett Region decreased from an average of 2.55 to an average of 2.50, or a decrease of 5%. In the Town of Ashburnham the figures for persons per unit are higher, but also follow the trend by decreasing as well, from 2.95 to 2.87. Another factor contributing to smaller household sizes is "the graying of America", that is, our nation's elderly population is expanding. The Census data clearly demonstrates that this national trend is taking place in Ashburnham. This may be reflected in median age changes. In 1980 the median age was 30.4, in 1990 it went up to 32.9, and by the 2000 census it had increased to 37.3. In addition, the over 75 years age sub-set increased 31%.

Persons Per Household Unit ChangeAshburnham

2000 Population	2000 HH Units	Persons/ HH Unit	1990 Population	1990 HH Units	Persons/ HH Unit
5,546	1,929	2.87	5,433	2,204	2.95

Source: U.S. Department of Commerce, Bureau of the Census 2000

4. Number and Type of Housing Units

Statewide these phenomena are due primarily to the increase in non-family households that include single persons living alone. In other areas/regions there are fewer households and a greater number of non-family households.

Number and Type of Household Units Ashburnham

Type of Unit	Number of Units	Percent of Total
One Unit (detached)	2,081	94.4
One Unit (attached)	-	-
Two Units	75	3.4
Three or Four Units	-	-
Five to Nine Units	19	0.9
Ten to Nineteen Units	-	-
Twenty or more Units	29	1.3
Mobile Homes	-	-
Total Housing Units	2,204	100

Source: U.S. Department of Commerce, Bureau of the Census 2000

Type of Housing Units in Comparable Communities - Year 2000

Town	Total	One Unit		Two Units		3-4 Units		5+ Units		Mobile Homes	
		#	%	#	%	#	%	#	%	#	%
Groton	3,393	2928	86.3	262	7.7	66	1.9	125	3.7	12	0.4
Ashby	1,011	979	96.8	22	2.2	4	0.4	4	0.4	2	0.2
Ashburnham	**2204**	**2081**	**94.4**	**75**	**3.4**	**0**	**0**	**48**	**2.2**	**0**	**0**
Hubbardston	1360	1231	90.6	35	2.6	50	3.7	37	2.7	7	0.5
Winchendon	3659	2500	68.3	420	11.5	310	8.5	354	9.6	75	2
Templeton	2597	2126	81.9	154	5.9	150	5.8	117	4.6	50	1.9
Clinton	5844	2780	47.6	980	16.8	992	17	1035	17.8	58	1
Lancaster	2141	1745	81.5	89	4.2	148	5.6	40	1.9	0	0
Phillipston	739	708	95.8	17	2.3	1	0.1	2	0.3	0	0
Royalston	527	461	87.5	31	5.9	0	0	0	0	0	0
Sterling	2637	2236	84.8	219	8.3	105	4	4	0	0	0
Westminster	2694	2476	92	71	2.6	52	1.9	9	0	0	0

Source: U.S. Department of Commerce, Bureau of the Census 2000**.**

Please note that the above tables include all housing units in Ashburnham, including vacant houses and seasonal houses. The two tables above indicate that 94.4% of Ashburnham's housing stock is of the single-family unit variety and 5.6% is of the multi-family variety. In the comparable examples, a few communities exceed the percentage of single family units in Ashburnham; Ashby (96.8%), Phillipston (95.8%), while the Town of Clinton had significantly less at 47.6 %. Generally, the majority of multi-family units are rental properties. The Town's housing mix has changed over the past ten years from 90% to 94.4% single family homes. The 1990 Census lists 17 mobile homes, and 9 "other" units that do not show up on the 2000 Census.

5. Age of Housing Stock

The following table indicates that 45.8% of Ashburnham's housing stock is 60 or more years old, having been built before World War II. Nearly two thirds of Ashburnham's housing stock was built before 1969 (59%), and being over 30 years old, it is safe to say that many of Ashburnham's dwelling units would not meet the State's current building codes or pass muster with the Town's Building Inspector.

In the 1980's, 512 housing units were constructed, followed by another 199 units in the 1990's. This growth of 711 units in 20 years expanded the housing stock by 32.2% over the units existent prior to 1980. The 711 housing units, nearly one third of the total stock of 2,204 units, plus those constructed after the year 2000, are considered to be relatively new and therefore are considered to be safer because they would be lead-free. Lead paint was prohibited in 1978 and many of the homes constructed prior to 1978 contain lead. Looking at the ages of the housing stock, 67.8% of the homes were built prior to 1979 and some could possibly contain lead paint. Those older homes that have kept varnished moldings, windows, and trim would present no problem. Testing is now readily available.

Age of Housing Stock Ashburnham

Year Structure Built	Number of Units	Percent
1999 to March 2000	34	1.5
1995 to 1998	95	4.3
1990 to 1994	70	3.2
1980 to 1989	512	23.2
1970 to 1979	195	8.8
1960 to 1969	290	13.2
1940 to 1959	427	19.4
1939 and earlier	581	26.4

Source: U.S. Department of Commerce, Bureau of the Census 2000

6. Mortgage Status and Selected Monthly Owner Costs

In Ashburnham, 1,125 or 75.9% of the units carry a mortgage and 357 or 24.1% have no mortgages. Of those mortgage units, 779 or 52.6% are carrying a monthly mortgage cost of over one thousand dollars and seven of those units carry a mortgage of over $2,000. The median mortgage for the community is $1,152.

a) Selected Monthly Owner Costs as a Percentage of Household Income in 1999

The US Department of Housing and Urban Development considers that a household spending 30% or less on their housing, including items such as insurance and heat, to be affordable. In Ashburnham 77.6% of the households are within the guidelines, and 21.3% or 315 households are spending more than 30% of their incomes on housing costs with 1.1% of the units not computed. Ashburnham has a lower percentage of households exceeding the affordable category than many other communities. Those households, on paper are considered to be living beyond their means.

Mortgage Status and Selected Monthly Owner Costs Ashburnham 2000

	Number	Percent
With a Mortgage	1,125	75.93
Less than $300	0	0
$300 to $499	14	0.9
$500 to $699	65	4.4
$700 to $999	267	18
$1,000 to $1,499	628	42.4
$1,500 to $1,999	144	9.7
$2,000 or more	7	0.5
Median in Dollars	1,152	-
Not Mortgaged	357	24.1

Source: U.S. Department of Commerce, Bureau of the Census 2000

Selected Monthly Owner Costs as a Percentage of Household Income in 1999

Percentage of Household Income	Number	Percent
Less than 15%	440	29.7
15 to 19%	266	17.9
20 to 24%	241	16.3
25 to 29%	203	13.7
30 to 34%	77	5.2
35% or more	238	16.1

Source: U.S. Department of Commerce, Bureau of the Census 2000

Mortgage Information Montachusett Region Year 2000

City/ Town	Mortgaged	Not Mortgaged	Total Owned	Rented
Ashburnham	**1125**	**357**	**1714**	**215**
Ashby	552	153	899	79
Athol	1783	853	3156	1331
Ayer	999	309	1661	1321
Clinton	1558	747	3028	2569
Fitchburg	3736	1850	7708	7235
Gardner	2439	1048	4520	3762
Groton	2008	357	2740	528
Harvard	1110	324	1638	171
Hubbardston	768	177	1195	113
Lancaster	1059	374	1622	427
Leominster	5465	2119	9545	6946
Lunenburg	1861	807	3085	450
Petersham	152	73	362	76
Phillipston	350	65	527	53
Royalston	181	71	393	56
Shirley	810	280	1457	610
Sterling	1471	461	2186	387
Templeton	1240	438	1996	415
Townsend	1907	355	2624	486
Westminster	1424	582	2169	360
Winchendon	1546	411	2492	955
Totals	33544	12211	56717	28545

Source: U.S. Department of Commerce, Bureau of the Census 2000

b) Selected Monthly Rental Costs: Gross Rents

In a survey released on September 5, 2003, the National Low Income Coalition, "Out of Reach: 2003", found that aside from Metropolitan Washington D.C., the Bay State remains the toughest place to find a rental apartment. This is the second year in a row that Massachusetts topped all other states.

In Metropolitan Worcester it is estimated that 50 percent of renters can't afford to live in a two-bedroom unit, which would require a wage of $15.90 an hour. The survey calculated living costs for renters for every state and region in the United States and found that housing costs increased faster than wages and the cost of goods. The survey calculated the "housing wage", what a person working full time has to earn to afford a two-bedroom apartment at fair market rent while paying no more than 30 percent of their income for housing.

They found that the national "housing wage" increased by 3.7% in the past year, and the inflation rate only went up 2.1%. Since 1999 the 'Housing wage" increased 37%. In Massachusetts, the average "housing wage" of $22.40 makes it the least affordable state in which to rent an apartment. At the same time a minimum wage earner making $6.75 an hour can only afford a rent of $351. In addition a household on Social Security earning $666 per month can only afford a monthly rent of $200.

The fair market rent statewide is $934 for a one-bedroom apartment, and $1,165 for a two-bedroom apartment. Thus a Massachusetts worker earning minimum wage would need to work 133 hours a week to afford a two-bedroom apartment.

In Ashburnham 62% of the renters are paying less than 30% of their income on housing. This may be seen as one of the reasons those in need of affordable housing are gravitating toward the towns of the Montachusett Region.

There are 216 occupied rental units in Ashburnham. The gross rents range from less than $200 per month to less than $1,000 per month. These figures do not include the households that do not have a cash rent (26). As with mortgages, gross rents as a percent of income shows that while 62% of the renters are below the 30% affordability guideline, and excluding households without cash rents, on paper, 25.9% of the renters are spending more than 30% of their incomes and of those 22.7% are spending more than 35% of their incomes. Those spending over 30% are considered living beyond their means.

Renter Occupied Units Ashburnham 2000

	Number	Percent
Renter Occupied Units	216	100.00
Gross Rent		
Less than $200	7	3.2
$200 to $299	0	0
$300 to $499	29	13.4
$500 to $749	121	56.0
$750 to $999	33	15.3
$1,000 to $1,499	0	0
$1,500 or more	0	0
No Cash Rent	26	12.0
Median Rent	664	---

Source: U.S. Department of Commerce, Bureau of the Census 2000

Gross Rent as a Percentage of Household Income in 1999

Percent of Gross Rent	Number	Percent
Less than 15%	46	21.3
15 to 19%	29	13.4
20 to 24%	29	13.4
25 to 29%	30	13.9
30 to 34%	7	3.2
35% or more	49	22.7
Not computed	26	12.0

Source: U.S. Department of Commerce, Bureau of the Census 2000

7. Housing Occupancy

In 1990, there were a total of 1,570 owner occupied housing units and that figure increased to 1,714 by the year 2000. During the same time span rental units decreased from 264 to 216. The following table indicates that 88.9% of Ashburnham's current housing stock is currently owner-occupied, up from 68.9% in 1990. In terms of the percent of occupied housing units versus the percentage of vacant units over the last decade, the 1990 Census indicated a 1.0% homeowner vacancy and a.0.5% for rental property. The 2000 Census reported that the homeowner vacancy rate stayed at 1.0% and the rental vacancy rate increased to 1.8% indicating a slightly less competitive rental market.

Type of Occupancy

	1990 Number	1990 Percent	2000 Number	2000 Percent	Change Number	Change Percent
Owner Occupied Units	1,570	68.9	1,714	88.9	206	13.1%
Renter Occupied Units	264	11.6	215	11.1	-49	18.56%

Source: U.S. Department of Commerce, Bureau of the Census 1990, 2000

8. Type of Households

The census for the year 2000 indicates that 79.9% of Ashburnham's households consist of families. This represents an decrease since the 1990 Census when family households accounted for 91.0% of all households.

There has been an increase in the number of households headed by females. The 1990 Census counted 114 households (7%) of all households headed by females, while the 2000 Census counted 179 (9.3%) or 65 more households, a 57% increase in 10 years.

Since the majority of rural communities are usually largely made up of single-family homes, they tend to have a higher percentage of family households; non-family households tend to rent. In comparison to similar communities, the following table indicates that Ashburnham has a larger amount of family households (79.9%) than the median (73.50%) for a community in the Montachusett Region. Only four communities have a higher percentage of family households than Ashburnham, with Harvard being the highest (82.59%).

9. Housing Demand Assessment & Needs Analysis

The following analysis will document the demand for housing in Ashburnham, the housing needs of local residents and what is actually available (and affordable) for housing opportunities. Before going any further, it is important to outline the assumptions used in this analysis.

- The analysis makes use of year 2000 statistics so that they may be cross-referenced to the 2000 US Census data.

- The median family income for the Montachusett Region, as determined by the U.S. Department of Commerce, Bureau of the Census 1990 was $43,576 and $54,629 in 2000, showing an increase of 25.4%.

Household Income

Community	Median Household Income 1989	Median Household Income 1999	% Change
Ashburnham	**$45,359.00**	**$55,568**	**22.5%**
Region Average	$43,576.00	$54,629	25.4%
Massachusetts	$44,367.00	$50,502	13.8%
US	$21,329.00	$41,994	96.9%

Sources: U.S. Department of Commerce, Bureau of the Census 1990 and 2000, June 2003.

- The State Department of Housing & Community Development (DHCD) Year 2004 Housing Certification Program based on the Fitchburg-Leominster Statistical Area lists the median income at $60,900, the affordable purchase price for a home in the Town of Ashburnham for a median income household at $199,839 and the affordable rent at $1,523. This assumes 5% down, 6.5% APR mortgage for 30 years, 30% of income for housing costs and $300/ month for taxes and insurance. There was no change from 2003. The U. S. 2000 census lists lower figures with the median household income at $55,568. Out of the 1,930 households, 1,341 have incomes less than $75,000, or 69.48%. The figures used here will be from the 2000 U.S. Census.

- Ashburnham's poverty-level income figure was obtained from the 2000 US Census using the level of 30% of median income.

- Housing demand and need was calculated for poverty-level households, low-income households (poverty-level to 50% of the area median income), low-to-moderate income households (50-65% of the area median income), moderate-to-middle income households (65-80% of the area median income), middle-income households (80-150% of the area median income) and upper income households (above 150% of area median income).

- It was assumed that households making up to 50% of the area median income would not be in the market for buying a home but instead would most likely rent their housing.

- It was assumed that households making more than 65% of the area median income would most likely be in the market for buying a home, especially as the 2003 interest rates have reached the lowest levels in decades.
- For renters, it was assumed that 30% of their annual income would go towards rent.
- For homebuyers, it was assumed that 28% of their monthly income would go towards a house mortgage principal and interest. It was further assumed that homebuyers would make a down payment of at least 10% and have a 30-year mortgage at 6.5%.
- The number of rental units and their price ranges were estimated from the 2000 Census.
- Year 2000 home sales data was obtained from the Warren Group Town Stats /Market Statistics, Banker and Trades

a) Rental Unit Need

The following table provides an affordability analysis for Ashburnham rental units. The table outlines the various renter income categories, the number of Ashburnham households fitting the income categories, the number of rental units in Ashburnham that are affordable to the various income categories and the gap/surplus for such rental units.

Rental Unit Need/Demand Analysis

Income Group	Range of Incomes	Range of Affordable Rent	# Of Households	# Of Actual Units	Deficit/ Surplus
Poverty	$16,670 *($15,000 and Below)	$416 and Below	169	36	-133
Poverty-to-Low	$16,671 *($15,000 to $27,784) *($35,000)	$417 to $694	295	121	- 174

*The U.S. Census groups income at $15,000 and $35,000, and not the poverty level.

The above indicates that Ashburnham has a shortage of rental units that are affordable. The 2000 US Census further supports this assertion as 56 Ashburnham households were identified as paying more than 30% of their monthly income towards rent. It is generally assumed that renters paying more than 30% of their monthly income towards rent are exceeding their affordability.

However, in terms of affordable rental units, Ashburnham ranks fairly well when compared to the region's other communities. The Year 2000 DHCD Housing Certification Program lists an affordable monthly rent figure of $1,523 (30% of area median family income) for the Fitchburg/Leominster Statistical Area. According to the Year 2000 US Census, there are 216 rental units in Ashburnham and 100% of them, discounting the "no cash rent" category (19), had a monthly rent under $999. Every unit was well below the $1,523 DHCD affordable monthly rent. In addition the median rent was well below that figure at $664 or 43.6% less than the Fitchburg/Leominster Statistical area. Thus, Ashburnham's rental units are very affordable when considered within the regional context.

b) Homeownership

Ashburnham also fares very well in terms of homeownership opportunities. There were 113 total single family housing unit sales in Ashburnham during the year 2003. The table below provides an analysis of demand for homeownership in Ashburnham. The table outlines the various homeownership income categories (50%, 65%. 80%, and 150% of Median income), and the range of affordable housing prices that a household could be expected to spend on a housing unit at 28% of their income.

Homeownership Analysis

Income Group % of Median	Income	Range of Affordable Housing Prices	Down Payment	%	Cost Per Month w/o taxes/ins.
50%	$27,780	$87,047	$9,679	11.1%	$489
"	"	$105,798	$27,656	26.1%	$494
65%	$36,119	$116,812	$17,006	14.6%	$631
80%	$44,454	$254,000	$12,739	5.0%	$1,530
100%	$55,568	$170,811	$15,336	9.0%	$983
"	"	$183,208	$30,416	16.6%	$966
150%	$83,352	$247,951	$12,950	5.2%	$1,485

Based on calculators from Homestore, Inc, Westlake Village, Ca, REALTOR.com, and GINNIEMAE.gov

The above table indicates that homeownership in Ashburnham was within the grasp of some of the various income groups. As mentioned previously, the median family income in the Fitchburg Leominster Statistical Area was $60,900 for the Year 2003, with an affordable home purchase price of $199,839 for a median family income. Of the qualified home sales over the years from 2000 to 2003, the median prices for did not exceed the Affordable Housing Price. Housing prices were even favorable when the actual median household income ($55,568) is taken into account. Thus, housing in Ashburnham was quite affordable when considered within the regional context.

In March of 2004 one house had an asking price of $121,000 (one bedroom) that is near the affordability range of the 65% of median income households. Nine others had asking prices between $135,000 (a used manufactured unit) and $195,000 that are within the range of households in the 80% to 100% of median income. Those households in the 50% and below category would not be able to find a house on the market to purchase. Of the 51 houses offered for sale in March of 2004, the median asking price was $289,000. This median asking price was well above the affordable price for those households earning 150% of the median income ($83,352).

Rising housing costs appear to be outpacing household income. According to The Warren Group, in the year 2003, the median sales price of a single-family home increased to $209,000 while the median income increased in the census had to $55,568. Coupled with lower interest rates (approximately 6% to 6.25%) those households earning 65% of the median area income can still afford a single family home in Ashburnham. But, those households earning 50% of the median area income might now find the prospect of homeownership more difficult; based on a 6.5% interest rate with 14.6% down this income group could afford a home costing approximately $88,000 to $106,000 based on 28% of income (not including taxes and insurance). While the rents being paid are lower than in many areas, 72.6% of the household units are paying $749 or less, which discounting taxes, would cover the mortgage on lower priced housing units.

10. Supply of Subsidized Housing

In 1969, the state passed M.G.L. Chapter 40B with the goal of increasing the amount of affordable housing in communities throughout the Commonwealth. It contains two major components which are meant to assist developers who wish to build housing that meets the affordable housing criteria as outlined within the law. The first component is the Comprehensive Permit process, where several local permit applications are consolidated into a single application to the Zoning Board of Appeals (ZBA). The ZBA is authorized to grant waivers from zoning and other local regulations to make a project economically viable. The second component gives developers the right to appeal ZBA decisions to the Massachusetts Housing Appeals Committee (HAC) in communities where the percentage of affordable housing units falls below 10% of the year-round housing units. In order to meet the criteria for affordable housing, 25% of the units in a proposed project must be affordable to households who earn no more than 80% of the area median income written into the deed for at least 30 years.

SUBSIDIZED HOUSING UNITS

FOR THE MONTACHUSETT REGION / 2000

	Year round Units	Total 40B Units	% Subsidized 40B Units
Ashburnham	**1997**	**25**	**1.25**
Ashby	1000	0	0
Athol	4775	227	4.75
Ayer	3141	118	3.76
Clinton	5817	527	9.06
Fitchburg	15963	1565	9.8
Gardner	8804	1321	15
Groton	3339	95	2.85
Harvard	2156	33	1.53
Hubbardston	1348	36	2.67
Lancaster	2103	74	3.52
Leominster	16937	1374	8.11
Lunenburg	3605	54	1.5
Petersham	453	0	0
Phillipston	598	0	0
Royalston	470	3	0.64
Shirley	2140	57	2.66
Sterling	2611	40	1.53
Templeton	2492	118	4.74
Townsend	3162	50	1.58
Westminster	2609	75	2.87
Winchendon	3563	291	8.17

Supply of Subsidized Housing

Year	Total Year-Round Housing Units	Total Chapter 40B Units	% Subsidized Base
2002	1997	25	1.25%

Source: Mass. DHCD, Revised April 24, 2002

Ashburnham's percentage of 40 B housing units amounted to 1.25% as of 2002, well below the state's goal of 10%. The number of 40B units in town did not change between 1990 and 2002. With the number of year round units increasing during the decade, the percentage of affordable units decreased during the period.

In the EO 418 Community Forum a desire for affordable senior housing was expressed. It was felt that seniors who needed smaller affordable housing and assisted living, were forced to leave town and live far from family and friends. It was strongly suggested that the town encourage the development of this type of housing.

C. Housing Visions, Goals, and Objectives

1. The Visioning Process

In July 2003, local residents and community officials attended a forum and interacted with their neighbors and local officials in a "visioning session". The group focused on their values in relation to development challenges. Comments and ideas were expressed regarding the assets/strengths, liabilities/weaknesses and needs of the town in the four EO 418 areas. From this session, goals and objectives were developed.

Several themes emerged from this session that related to the housing element.

- Planning for future growth must occur.
- Identify separate areas for housing and commercial growth in combination with areas to be preserved and the resources protected.
- Provide affordable housing for all ages and income levels.
- Do not develop excessive amounts of housing.
- Maintain the "Rural Character" of the community.

2. The Housing Goal

The goal related to the development of housing; Most people understand that growth will continue to occur, and agree that Ashburnham's "Character should remain as stable, and as rural as possible, and that managing future growth will enable the community to maintain most, if not all, of its amenities.

3. Objectives Related To Housing

- Increase housing opportunities for a broad range of income levels.
- Preserve Ashburnham's Rural Character as the town continues to grow.
- Increase the supply of affordable rental units and subsidized units especially for seniors.
- Improve the condition of Ashburnham's present housing stock.
- Promote home ownership.
- Improve collaboration between town and developers to build affordable housing, and use deed restrictions.
- Permit the development of backland in order to preserve road frontage.
- Anticipate the future needs of seniors for affordable housing.
-

4. Recommendations

Ashburnham's Population and Housing Stock will Continue to Expand

According to the Housing assessment and Analysis, Ashburnham's population and housing unit production have expanded at a moderate pace over the last ten years. This trend is expected to continue.

Even if it were desirable, it is not possible to stop growth in Ashburnham by protecting the remaining undeveloped land as open space: there is simply too much undeveloped land (See Build-Out Results). This condition of ample developable land is likely to remain the case for several decades. Therefore, Ashburnham must think in terms of managing growth, not stopping it entirely.

Communities experience the negative impacts of growth long before final build-out is reached. This pattern is apparent in Ashburnham where growth has, to some degree, affected tax rates, scenic quality, and traffic even though plenty of land and even road frontage remain undeveloped. Thus, growth management strategies for the next 25-50 years must focus on channeling growth into patterns that minimize environmental, fiscal, scenic, and transportation

impacts – not necessarily on reducing the ultimate long-term build-out, which may not happen for 100 years or more, if ever.

What can the Town Do to Preserve its Rural Character?

Open Space Subdivision:

While it appears that there are benefits associated with utilizing large lot zoning as a tool for preserving open space, ***the Town should seriously consider an Open Space Subdivision bylaw*.** Density controls have both positive and negative effects on build-out patterns. In the short-term, large lot residential zoning accelerates the conversion of a community from rural to suburban in character by consuming large amounts of land and encouraging sprawled development. An Open Space Subdivision is a mechanism that has the potential to preserve rural qualities without increasing long-term fiscal consequences.

An Open Space Subdivision allows for building houses closer together than would normally be allowed under the underlying zoning requirements, while preserving the remaining land as open space. Importantly, an Open Space Subdivision can help to preserve rural character *if* the local bylaw gives the Planning Board the flexibility to determine what areas of the property are to remain as undeveloped. Open space housing can make economic sense for a municipality in several instances, such as having a central location for picking up school children, reduced road and infrastructure maintenance costs and the permanent protection of open space. If municipal utilities are required, the lines for such utilities can be extended into an open space subdivision cheaper than they can be extended down an existing road as part of a conventional development proposal. Furthermore, instead of the town having to acquire and develop recreational lands, a portion of the development's open space can be used to provide recreation facilities for the residents.

Open space housing is also consistent with Ashburnham's rural character, compact villages, and open space preservation goals. The Town should adopt an effective Open Space Subdivision bylaw now, in anticipation of new subdivisions. An Open Space Subdivision may also be used as a way to acquire publicly accessible land for sports, paved and unpaved trails, and other public facilities.

In order for such a bylaw to be effective, it must be written in such a way that a developer would prefer to utilize the Open Space Subdivision concept as opposed to the standard subdivision process. Allowing Open Space Subdivisions "by-right" in areas could help to promote this type of development. Factors to consider when designing an Open Space Subdivision bylaw include: density bonuses, minimum lot sizes, quantity and quality of required open space, drainage, water, waste disposal, length and width of interior roads and of course public health and safety. Most important is to make the process clean and easy to negotiate for developers so it becomes a win/win situation.

Adaptive Reuse:

The reuse of any abandoned, underutilized, or obsolete property
could enable Ashburnham to direct growth towards already developed locations in its village centers thus negating the need to develop additional land in areas without existing infrastructure. It would also be a way of preserving and/or restoring unique architecture in the community, which can also be of historical significance.

The Town could inventory publicly owned property, vacant, underutilized, deteriorated land and/or buildings with residential reuse potential. It can be possible to acquire such properties through tax taking, donation, negotiation, distress sale, and bank foreclosure, or brownfield remediation.

Backlot Zoning:

Backlot zoning allows a developer to reduce the required frontage of a lot in exchange for building on land further from the road. Backlands provisions address concerns over "Approval Not Required" development, in which the entire frontage along existing public ways is developed lot by lot, in a piecemeal fashion. By allowing developers to forgo the frontage and develop further from the road, a pattern can be encouraged that

is less visible from scenic roads, less likely to disturb existing historic stone walls or tree corridors, and less consumptive of remaining frontage.

Rent is Expensive for Lower Income Groups

The U.S. Census indicates that households were identified as paying more than 30% of their monthly income towards rent, which is excessive. In addition, there is a deficit of rental units affordable to poverty and low-income individuals.

Ashburnham's population is also growing older. Most elderly individuals are on a fixed income, which often makes it very difficult to continue to maintain their home throughout their retirement years. Ashburnham's 75 and over population has grown from 161 to 211 persons between the years 1990 and 2000 representing a 31% increase. Ashburnham's next generation of senior citizens (55-74 population) has grown by 7.6% since 1990. The segment of the Town's population aged 35-54 has grown by 30% over the last decade. Therefore, coupled with health care advances, it is anticipated that Ashburnham will have a severe shortage of affordable elderly housing and will be dealing with this issue for some time to come.

How Can the Town Help House these Ashburnham Residents?

The Town could include Senior Housing provisions in the Zoning Bylaw.

Ashburnham's Zoning Bylaw does not contain any provisions that directly address the need for senior housing alternatives. Many communities in Massachusetts have adopted senior housing bylaws within their zoning framework. Such bylaws can take the form of senior residential communities, retirement communities, as well as assisted living and residential care facilities (both are governed by State regulations). The Town needs to give serious consideration to the type of senior housing alternative that best meets its elderly housing needs, whether it be a senior residential community, retirement community, assisted living facility or a residential care facility. In general, housing development in a community can have a negative impact on municipal finances largely due to educational expenses of school age children. However, senior housing would not impact municipal finances to such a degree; usually very few school age children would reside in this type of housing.

The Town could consider adopting an Accessory Apartment Provision within its Zoning Bylaw.

An accessory apartment is a second dwelling unit located within a single-family home, or it can be located above a garage or within an accessory structure. Another term for accessory apartments is "in-law apartments", for use by a related family member. Accessory apartments allow elderly people to live in close proximity to their family, as well as young people who cannot afford their own home at the time. Surely families would appreciate the option of setting up an elderly parent with their own separate living space to live independently at a low cost. Accessory apartments also allow the primary homeowner to collect a bit of rent, thus helping them cope with property taxes. Many communities have adopted accessory apartment bylaws and have found that they provide a viable housing alternative for their residents. Similar to elderly housing, it is unlikely that school age children would reside in this type of housing lessening any potential impacts on municipal finances.

Issues to consider when drafting an accessory apartment provision include access/egress to the apartment, external appearance of the principal or secondary structure, parking, sewage disposal, trash disposal, size limitations and the permitting process. Allowing accessory apartments would provide another housing choice for Ashburnham's elder residents and young people who cannot yet afford to buy a home.

The Town could encourage Multi-Family Dwellings in its Center.

Ashburnham Center already has the infrastructure in place to accommodate higher density housing. Such housing tends to be more affordable than single-family homes on large lots, due to smaller land costs per unit and lower construction costs. Thus, having more multi-family units would help the Town bridge the gap in affordable rental units. Having more people live in the village areas will increase the demand for shopping

opportunities, services and food establishments. Allowing a higher population density in areas with public water, and the creation of small wastewater treatment plants, would also alleviate some of the pressure to develop housing in the more rural areas of town and help reduce road and infrastructure maintenance costs. One way the Town could encourage multi-family dwellings in Downtown Areas would be through Adaptive Reuse (See above).

The Town Has a Shortage of Subsidized Housing

Chapter 40B of Massachusetts General Laws outlines a municipality's responsibilities regarding the provision of low and moderate-income housing. The law defines low and moderate-income housing as "…any housing subsidized by the federal or state government under any program…." Thus, by definition, a government subsidy is required in order to qualify as low and moderate-income housing. Please note that this is quite different from the issue commonly known as "affordable housing" which is generally defined as housing that costs no more than one third of a person's total income. Looking at the average home sale price and average contract rent in Ashburnham, it would be hard to argue that Ashburnham does not provide opportunities for affordable housing especially when Ashburnham's numbers are compared to similar communities in the region. However, poverty and low-income people cannot afford to buy a house in Ashburnham although many renters do not pay more than 30% towards rent. Furthermore, according to the Housing Assessment and Analysis, housing prices have outpaced household incomes over the last several years making homeownership more difficult.

Currently, there are only a handful of municipalities in Massachusetts that have achieved this 10% threshold. At the present time, only 1.25% of Ashburnham's housing stock meets the Chapter 40B definition. While this is not unusual for a community like Ashburnham, the town should make a good faith effort to provide its share of affordable subsidized housing for its citizens. For municipalities that do not meet the 10% threshold, the practical consequence is as follows: any developer proposing low and moderate income housing can have the project exempted from local zoning and subdivision requirements and the development could be built in any zoning district, regardless of suitability. Many communities were unpleasantly surprised to have comprehensive permit applications thrust upon them in very inappropriate locations.

How Can the Town Increase its Supply of Subsidized Housing?

Non-Regulatory Options:

The Town could review its non-regulatory options for providing low and moderate-income housing and make every effort to ensure that 10% of Ashburnham's housing stock consists of low and moderate-income housing.

- Grant Programs: The Town should take a closer look at the State's Affordable Housing Trust Fund and the various housing grant programs offered by the Massachusetts Department of Housing and Community Development (DHCD) (See Recommendation under Section 4A, for more detail concerning grant programs). The Board of Selectmen may opt to establish a Local Housing Needs Committee to assist in this effort.

- Inventory of Privately Owned Property: The Committee could inventory vacant, underutilized, deteriorated land and/or buildings with the potential of supplying subsidized housing and work with the property owner to help secure state funds.

- Publicly Owned Property: The Committee should also conduct an inventory of any publicly owned land/buildings that might be suitable for subsidized housing. There is a variety of State sponsored funding options that can be used to develop/rehabilitate publicly owned properties that have the potential to be converted to subsidized housing.

Chapter 40B Housing Proposals:

Town boards such as the Zoning Board of Appeals should receive training on how to deal with Comprehensive Permits as they relate to low/moderate income housing projects as defined by Chapter 40B. The UMass Extension's Citizen Planner Training Collaborative (CPTC) offers classes on this subject on an annual basis and will even provide customized training sessions to individual communities. In addition, DHCD has prepared a procedural "how to"

booklet for local communities. The Zoning Board of Appeals would be the responsible municipal entity to establish review criteria for comprehensive permit proposals. The Massachusetts Housing Appeals Committee Web site has guidelines and examples of model by-laws.

Inclusionary Zoning/Incentive-Based Zoning:

These methods require a strong real estate market with high housing costs perhaps making them impractical for the Town to utilize in the short term. However, over time housing costs will continue to escalate and the Town should be aware that these tools exist.

The general purpose behind inclusionary zoning and incentive-based zoning is to increase a community's affordable housing stock. Inclusionary zoning can be seen as the "stick" approach, while incentive-based zoning is the "carrot" approach. An inclusionary zoning bylaw is one that requires new subdivisions to set aside a certain percentage of new housing units as below-market units, i.e., units that can be counted towards the town's affordable housing unit inventory under Chapter 40B. Typically, inclusionary bylaws require that anywhere from 10% to 25% of new housing units consist of below-market units. The Massachusetts Zoning Act does not explicitly authorize inclusionary zoning, however, many Commonwealth communities have inclusionary zoning bylaws on the books and have made the case that such bylaws are legally valid under the State's "Home Rule" authority. Chapter 40B is an example of an inclusionary requirement. Massachusetts's courts have generally approved of inclusionary zoning; however, they have frowned on assessing fees in lieu of providing actual affordable housing units. Given the relatively slow pace of residential development in Ashburnham today, if the Town did opt for an inclusionary approach, a low percentage would be appropriate.

Incentive-based zoning attempts to increase the affordable housing stock by offering incentives to developers to create below-market units as part of their developments. Such incentives can include higher densities, reduced frontage, reduced setback requirements, a reduction in the required roadway width, reduced infrastructure connection fees, and other incentives that can improve a developer's bottom line. Incentive-based zoning is an example of giving something to get something. Incentive-based zoning is explicitly authorized within the Massachusetts Zoning Act. Incentives only become an effective tool when there exists a strong demand so that developers are willing to build the additional units in return for higher profits. The Town may wish to take some pro-active steps to bring its affordable housing unit inventory closer to the 10% required under Chapter 40B. Towards that end, Ashburnham should investigate both inclusionary zoning and incentive-based zoning over the long term and determine which approach would work best for the Town. The responsible municipal entity would be the Planning Board.

Ashburnham has an Older Housing Stock.

As indicated in the Housing Assessment and Analysis, 25.7% of Ashburnham's housing stock was built prior to 1940. And 32% were built prior to 1969. It is quite likely that many of these older residences would not meet today's various housing codes (plumbing, electricity, weather-proofing, building code, etc.). Aesthetic improvements could also be made, which would also serve to enhance the visual appearance of neighborhoods throughout the community.

What Could the Town do to improve its Housing Stock?

The Town of Ashburnham could further investigate various grant opportunities to see if they make sense for Ashburnham and its property owners. However, because of a shortage of housing throughout the Commonwealth, the Governor enacted Executive Order 418 (E.O. 418). One element of E.O. 418 involves Housing Certification. In order for a town to remain competitive when applying for many state grants, the town must be Housing Certified.

The Housing Certification process is an important part of Executive Order 418, "assisting Communities in Addressing the Housing Shortage". Its purpose is to provide an incentive for communities to assist residents by taking steps to increase the supply of affordable housing to individuals and families with low, moderate, and middle incomes. EO 418 definition of affordable housing is:

- Low-income households are those making up to 50% of the area-wide median income.
- Moderate-income households are those making up to 80% of the area-wide median income.

- Middle-income households are those making up to 150% of area-wide median income.

Communities that receive EO 418 Housing Certification are eligible to apply for certain discretionary grant program and to receive bonus points for other grant programs.

In FY 2004, housing certification is achieved if a community:

1. Has an acceptable Housing Strategy, and;
2. Can demonstrate that new units have been created for households and individuals with low, moderate, and middle incomes.

Please note that Ashburnham had an acceptable Housing Strategy and achieved Housing Certification in 2003.

There are numerous grant opportunities for housing rehabilitation projects, especially when they benefit low and moderate-income families. The following is a brief description of available housing rehab grants that can be utilized by the Town.

- *Community Development Block Grant Program*: This program was developed at the federal level by the US Department of Housing and Urban Development (HUD) and is implemented at the State level by DHCD. Funds for housing rehabilitation (code violations, roof and chimney repairs, siding, etc.) are available on an annual basis. In 2004, based on the new census, Ashburnham will be considered a CDF2 community by DHCD and may not be funded annually. If the town joins in a regional proposal with a CDF1 community funding would be possible. Communities that have been Housing Certified by DHCD receive bonus points when applying for Community Development Block Grant funds. The Montachusett Regional Planning Commission has helped the community to apply for CDBG grants and implemented those grants as well.

- *The Housing Development Support Program*: The Housing Development Support Program is a component of the federal Community Development Block Grant (CDBG) program administered by DHCD. The program is designed to assist with project-specific affordable housing initiatives with the emphasis on small-scale projects that might otherwise go un-funded. Typical projects include housing rehabilitation, new construction, reclamation of abandoned properties, elderly and special needs housing, and the conversion of obsolete and under-utilized buildings for housing. Funds can be used for acquisition, rehabilitation, site work and related infrastructure. Projects are limited to a maximum of seven housing units, 51% of which must be affordable to and occupied by low and moderate-income households (households earning up to 80% of the area's median household income).

- *The Massachusetts Affordable Housing Trust Fund*: The Affordable Housing Trust Fund (AHTF) was established by an act of the State Legislature and is codified under Chapter 121-D of the Massachusetts General Laws. The AHTF operates out of DHCD and is administered by MassHousing with guidance provided by an Advisory Committee of housing advocates. The purpose of the fund is to support the creation/preservation of housing that is affordable to people with incomes that do not exceed 110% of the area median income. The AHTF can be used to support the acquisition, development and/or preservation of affordable housing units. AHTF assistance can include:

  -Deferred payment loans, low/no-interest amortizing loans.
  -Down payment and closing cost assistance for first-time homebuyers.
  -Credit enhancements and mortgage insurance guarantees.
  -Matching funds for municipalities that sponsor affordable housing projects.
  -Matching funds for employer-based housing and capital grants for public housing.

  Housing developments financed by the AHTF can include market-rate units, but the Trust Fund cannot be used to support such units. The level of assistance provided by the AHTF to a specific project must be the minimum amount necessary to achieve the desired degree of affordability. Housing units created through the AHTF can be counted towards the Town's 10% threshold for affordable housing under Chapter 40-B (see the previous discussion under Item #3).

- *The Local Initiative Program*: The Local Initiative Program (LIP) is administered by DHCD and was established to give municipalities more flexibility in their efforts to provide low and moderate-income housing. The program provides technical assistance and other non-financial assistance to housing developed through the initiative of local government to serve households below 80% of the area's median household income. The program limits the State's review to the most basic aspects of affordable housing: the incomes of the people served, the minimum quality of the housing provided, fair marketing and level of profit. LIP projects must be initiated by the municipality, either through zoning-based approvals (rezoning, special permits, density bonuses, etc.), financial assistance and/or through the provision of land and/or buildings. LIP projects can include new construction, building conversion, adaptive re-use and building rehabilitation. LIP projects are usually administered at the local level by a local housing partnership and approved by the Board of Selectmen. Affordable housing units created by a LIP project will be counted towards the municipality's 10% low and moderate-income housing goal under Chapter 40B.

- *The HOME Program and the Housing Stabilization Fund*: These programs are offered by HUD (managed at the state level by DHCD) and are designed to support the acquisition and/or rehabilitation of existing structures. Acquisition funds are only available to low-income families. Eligible projects include: property acquisition; housing construction and/or rehabilitation; connecting to public utilities (sewer & water); and making essential improvements such as structural improvements, plumbing improvements and energy-related improvements. These programs are offered every two years. Once again, interested communities need to do a substantial amount of advance work prior to submitting a grant application.

- *The 'Get the Lead Out' Program:* This HUD-sponsored program is managed at the State level by the Massachusetts Housing Finance Agency (MHFA). This is a lead abatement program available to single family homes and 2-4 family properties. Offered on an annual basis, these funds are generally easier to apply for than the above referenced CDBG funds. The MRPC is administering these funds.

- *Home Improvement Loan Program*: Another HUD program managed by MassHousing, this program offers funds to eligible owners of one-to-four unit residential properties so that they can make necessary improvements to their residential structures. Eligible improvements include: sewage disposal systems and plumbing needs; alterations and renovations that will enhance property safety; energy-related improvements and repairs designed to bring the structure up to local building codes. Offered on an annual basis, these funds generally have an easier application process than the above referenced CDBG funds.

- *Weatherization Assistance*: HUD provides funding assistance to regional non-profit organizations for fuel assistance and weatherization programs. In order to be eligible for the weatherization program, the applicant must receive some form of federal fuel assistance benefits.

- Consider establishing a community land trust so that the affordable housing that is created can be kept permanently affordable.

Many Ashburnham Residents Currently Rent Their Housing

According to the 2000 U.S. Census, there are 216 renter occupied housing units in the Town of Ashburnham making up 11.1% of all occupied housing units. Owning a home is still the goal of most Americans, and research suggests that homeownership has a positive influence on families, neighborhoods and the economy. With 216 households of Ashburnham residents renting their housing, some could be unaware that homeownership is within their grasp.

How Can the Town Help to Promote Homeownership?

Homebuyer Counseling, Education

Homebuyer Counseling and Education are valuable marketing and outreach tools that can help Ashburnham residents bridge the information gap and prepare them for a successful application and ownership experience. The town of Ashburnham could either plan a first-time homeownership initiative by partnering with an agency or institution that provides homebuyer counseling or simply make it known to Ashburnham residents that such educational organizations exist. There are many nonprofit agencies that offer this service and most have informational brochures that

could be displayed at Municipal Offices. They are trained, monitored and certified by the Massachusetts Homeownership Collaborative, which is coordinated by the Citizens Housing and Planning Association (CHAPA). They provide "soup to nuts" information about the home-buying process, from how to budget or repair damaged credit to the many types of mortgage products and down payment assistance programs. Many also sponsor, or participate in, homebuyer fairs. The CHAPA website (www.chapa.org) maintains a list of counseling agencies and their current and planned activities. Many conventional lenders conduct similar programs.

Soft Second Loan Program

The program is designed to provide soft second loans to low and moderate-income first time homebuyers. Soft Second loans reduce the first mortgage amounts and lower initial monthly costs to enhance affordability.

Applicants must be income eligible and the purchased home must be their principal place of residence. The program places a preference on the purchase of existing units. Under the program buyers will get two mortgage loans that go together: a first mortgage that is 75% of the purchase price, and a "soft second" that is 20% of the price. The remaining 5% represents the buyers down payment (3% borrower's funds, 2% gift). The principal on the second mortgage is deferred to 10 years and public funds are used to pay for most of its interest during the first five years. Debt to income rations are based on the principal and interest payments of the first mortgage and just the buyer's interest payment on the "soft second" mortgage loan.

Local banks agree to discount the interest rate, charge no points, and reduce closing costs on 30 year fixed rate mortgages. Additionally, the SSLP eliminates payment of private mortgage insurance. Banks can sell the first mortgage to the secondary market or retain ownership. The second mortgage remains in the bank's portfolio (bank owned). A portion of the public funds are used to provide a 10% loan loss reserve for each second mortgage held by the bank. The loan lost reserve is paid to the bank at the time of the closing.

The structure and cost savings features of the SSLP significantly increases the buying power of low-income first time homebuyers. It expands housing opportunities and is bringing homebuyers into the market that would be otherwise left out.

The Commission has contracted the day to day administration of this program to the regional non-profit Housing Assistance Corporation (HAC). HAC pre-certifies the eligibility of potential buyers, track the progress of applicant, and conducts homebuyer workshops, which all participants are required to attend. The Commission is responsible for the overall administration of the Soft Second Loan program. The soft second mortgage interest subsidy is provided by the Department of Housing and Community Development.

The Town can contract the day to day operation to a non-profit that would pre-certify the eligibility of potential buyers, track the progress of applicants, and conduct homebuyer workshops, which all participants are required to attend. The town would be responsible for the overall administration of the Soft Second Loan Program. The soft second mortgage interest subsidy is provided by the Department of Housing and Community Development.

Participating banks are asked to sign a Memorandum of Understanding with the Town of Ashburnham and indicate how much mortgage money they will commit to the program. The banks are responsible for intakes, qualifying borrowers, loan origination, and loan closing eligible applicants select which bank to apply for a mortgage loan. These funds can significantly expand homeownership opportunities for low and moderate income homebuyers.

Self-Help Housing.

The Town could explore Self-Help Housing programs. Self-Help programs involve sweat-equity by the homebuyer and volunteer labor of others to reduce construction costs. Some communities have donated building lots to Habitat for Humanity to construct affordable single housing units. Under the Habitat for Humanity program, homebuyers contribute between 300 and 500 hours of sweat equity while working with volunteers from the community to construct the home. The homeowner finances the home with a 20-year loan at 0% interest. As funds are paid back to Habitat for Humanity, they are used to fund future projects.

D. SUMMARY:

Several recommendations are made in this report to assist the Town of Ashburnham address the housing needs identified in the Housing Assessment and Analysis. These needs include preserving the Town's rural character, assisting lower income groups and the Town's growing elderly population, increasing the supply of subsidized housing, improving the physical condition of the housing stock, and promoting homeownership. The following is a housing strategy that the Town could implement to meet its housing needs.

- First, the Board of Selectmen should form a Local Committee to work with or as the Housing Authority on implementing housing recommendations made in this report. Participating Committee Members could range from interested citizens, local municipal board members, members of the private sector i.e. mortgage officers, developers, etc. The Committee should work to educate the public about current and future housing needs, the social and economic benefits associated with it, and that it is important to achieve community acceptance of different forms of affordable housing. Municipalities can play a critical role in providing and facilitating public education in order to develop the community support critical to the success of affordable housing policies and initiatives. Municipalities have a variety of approaches available to help educate the public, ranging from workshops and public presentations to major media campaigns.

- An Open Space Subdivision bylaw, and an Accessory Apartment bylaw are highly viable recommendations that can be implemented now. An Open Space Subdivision bylaw would help the town to retain its rural character. An Accessory Apartment bylaw would assist lower income family members including the elderly on a fixed income.

- The Town should consider implementing a Senior Housing bylaw. Ashburnham's older population is increasing and the median age structure has increased 6.9 years since 1980. This would provide housing for a segment of the population that is not adequately served by Ashburnham's housing supply. Also, senior housing would probably have a minimal impact on town finances since very few school age children would reside in this type of housing.

- An inventory of public and private land/buildings suitable for subsidized housing should be conducted. The Local Committee should also investigate grant opportunities, including those that would improve the physical condition of the housing stock. In the past, the Town received Community Development Block Grant funds for housing rehabilitation. The Town might want to consider applying again.

- Many Ashburnham residents rent their housing. However, homeownership promotes stability, has a positive impact on neighborhoods, and is good for the economy. The town should participate in the Soft Second Loan Program and perhaps display homebuyer counseling and education pamphlets and brochures at Municipal Offices. Self-help programs like Habitat for Humanity should also be explored.

- The Town should start to consider integrating backlot zoning into the Town's Bylaws. These bylaws could help the Town to retain its rural character.

- Multi-family dwellings should be encouraged in areas with existing infrastructure, in part through adaptive reuse. Higher density housing can be more affordable and would also alleviate some pressure to develop housing in more rural areas.

- Over the long term, as the real estate market continues to strengthen and housing costs escalate in Ashburnham, the Town could begin to investigate other housing strategies such as inclusionary zoning/incentive-based zoning and transfer of development rights. This is a Long Range Goal that should be explored over the next 10 years.

- Finally, the Town should work to educate the public about its housing needs and the social and economic benefits associated different forms of housing. The Town could provide and facilitate workshops and public presentations to enhance community support.

1. Housing Unit Production and Land Use Suitability

According to the Housing Assessment and Analysis, the Town of Ashburnham is expected to grow by 447 persons between the years 2000 and 2010, and the typical Ashburnham household contains 2.87 persons. Taking into consideration the trend towards smaller household sizes, it is anticipated that an additional 156 housing units will need to be produced between the years 2000 and 2010 in order to house the expected population increase. To meet this goal, the Town's short-term numerical goal for housing unit production should be a minimum of 16 housing units per year. Currently, the Town is more than meeting this short-term goal; 37 building permits were issued in the year 2003, and they have averaged about 33 per year in the last eight years (1996-2003). All were for single-family houses. The most permits were issued in 2002 (47), followed by 2003 (37). .

It would appear that Ashburnham will more than meet the predicted needs for the amount of housing, but the missing factor is the affordability of housing. This can become a problem for both young/new first-time homebuyers and senior citizens.

The Town currently has a low mix of rental units (11.1% of the housing stock) in comparison to similar communities and should strive to increase this balance. Out of the potential (based on the average) 333 total units could be produced by the year 2010, and it is suggested that approximately 25% or 83 units should be rentals.

The Housing Assessment and Analysis indicates that much of the housing stock in Ashburnham is relatively affordable. However, only 1.25 % of the Town's housing stock is subsidized. While this is not unusual for a community like Ashburnham, there is a shortage of affordable rental units for poverty and low-income groups and the Town's elderly population is growing. The Town should make a good faith effort to increase the supply of subsidized units to 5% (approximately 117 additional units) by the year 2010.

Compared to the Region, there are 17 communities with a greater percentage of subsidized 40 B units, and four with less. Gardner is the only community over the 10% mark at 15%, and Fitchburg is second with 9.8%. Three communities are close at 8 or 9 %, but the rest are 4% and lower. Thus Ashburnham is at the low end for the Montachusett Region.

The following Housing Suitability Map identifies development potential in the Town. It is used together with the preceding recommendations, housing unit production goals, and the Open Space and Natural Resources mapping. The Housing Suitability Map locates those areas of town, that are best suited for various types of land uses.

Based on the responses received during the Community Forum, Ashburnham has sixteen sites designated as preliminary housing sites (see the Preliminary Housing Map). This is a large number of potential housing sites and should be revisited in terms of land use suitability and other factors to narrow the choices.

The following map summary starts in the north, and moves in a clockwise fashion east, south, and west.

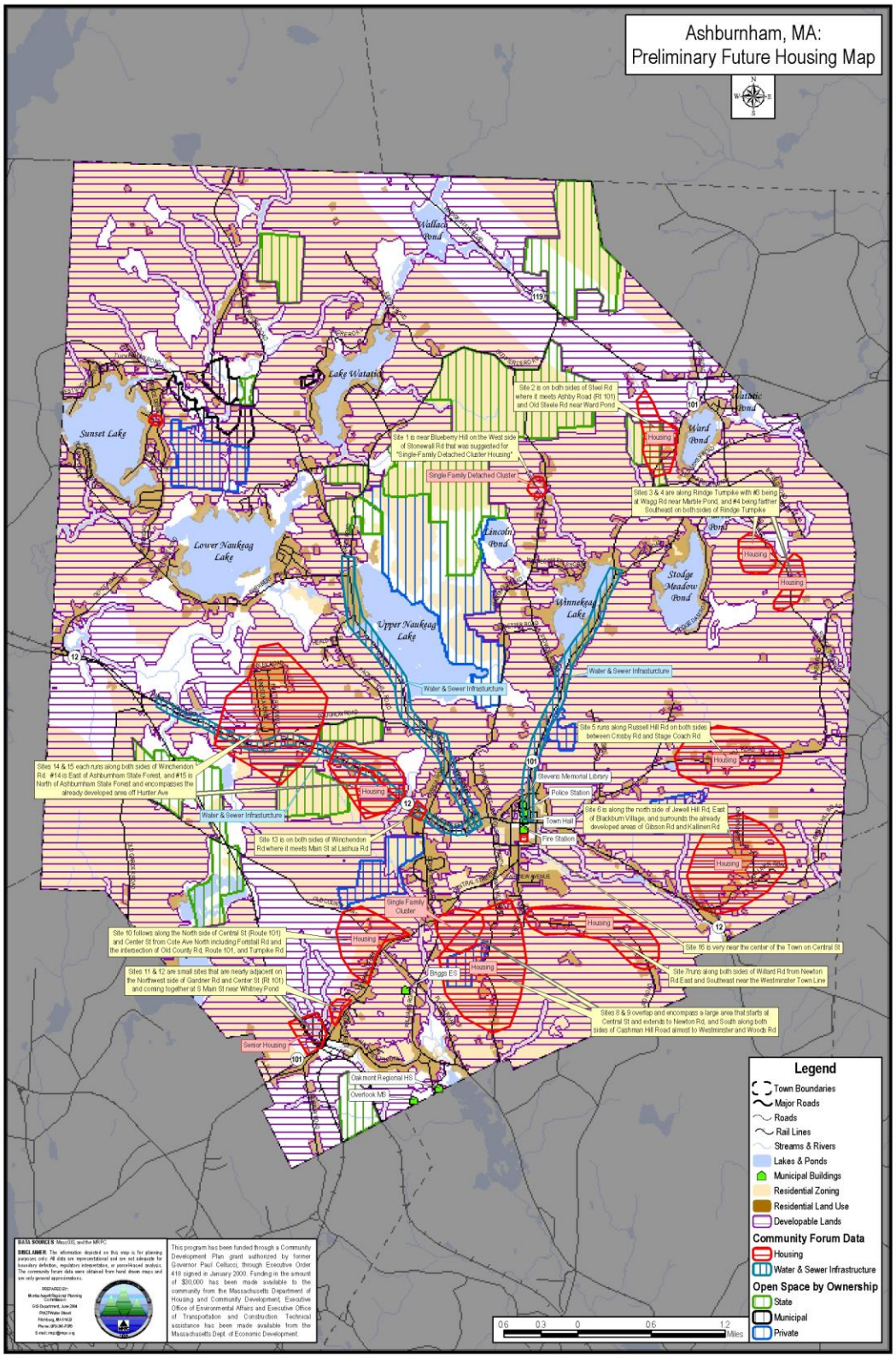
1- This is a site near Blueberry Hill on the west side of Stowell Road that was suggested for "single-family detached cluster housing."
2- Site 2 is on both sides of Steele Road where it meets Ashby Road (101) and Old Steele road near Ward Pond.
3/4- Sites three and four are along Rindge Turnpike with 3 being at Wagg road near Marble Pond, and 4 being farther southeast on both sides of Rindge Turnpike.
5- Number five runs along Russell Hill Road on both sides between Crosby road and Stage Coach Road.
6- Number six is along the north side of Jewell Hill Road, east of Blackburn Village, and surrounds the already developed areas of Gibson Road and Kallinen Road.
7- Site number seven runs along both sides of Willard Road from Newton Road east and southeast near the Westminster town line.
8/9- Sites eight and nine overlap and encompass a large area that starts at Central Street, and extends to Newton Road and south along both sides of Cashman Hill Road almost to Westminster and Woods Roads.
10- Number ten follows along the north side of Central Street (101) and center Street from Cote Avenue north including Foristall Road and the intersection of Old County Road and 101 and Turnpike Road.
11/12- Eleven and Twelve are small sites that are nearly adjacent on the northwest side of Gardner Road AND

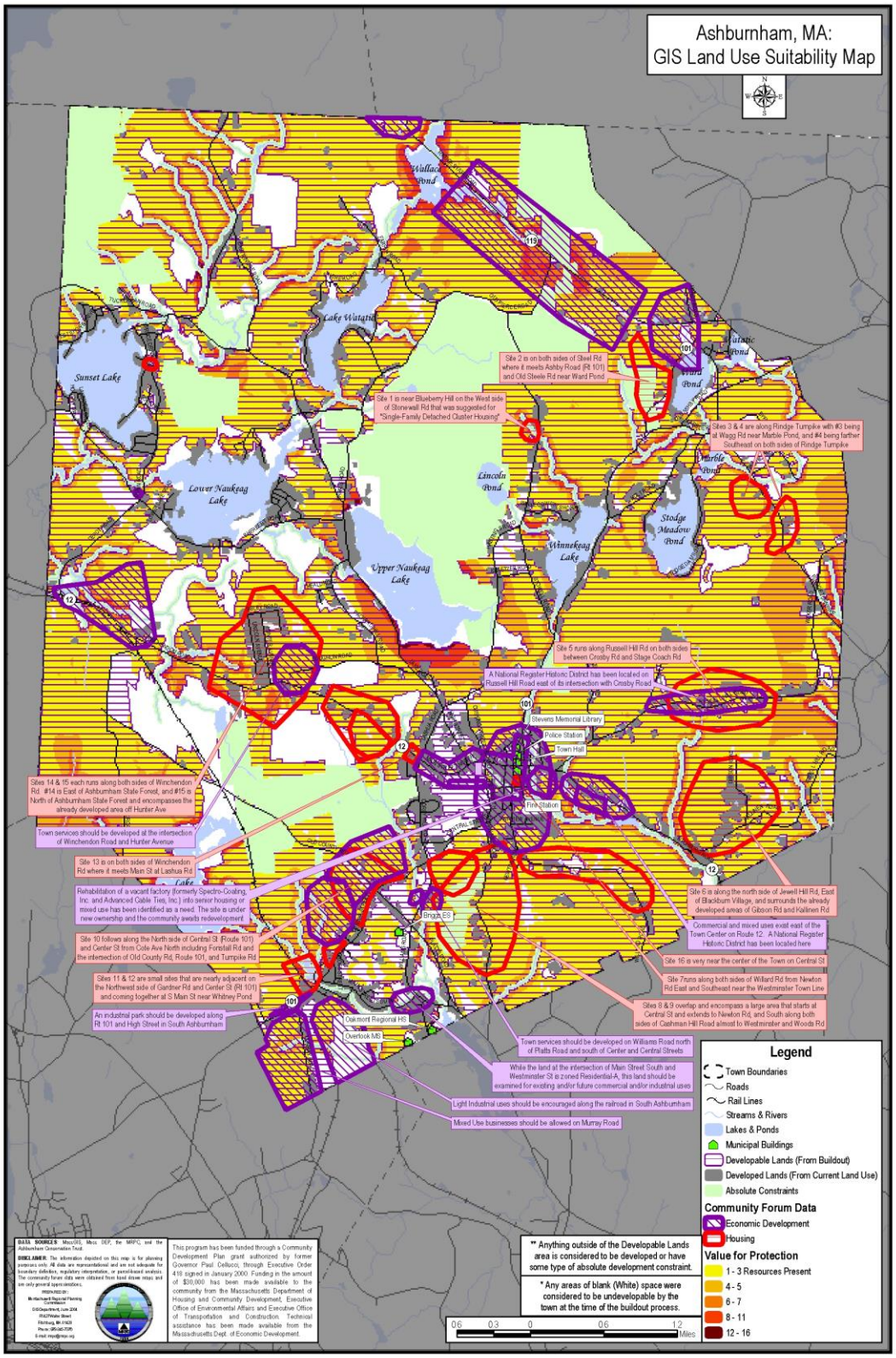
center Street (101) and coming together at South Main Street near Whitney Pond.
13- Site Thirteen is on both sides of Winchendon Road where it meets Main Street at Lashua Road.
14/15- Site fourteen and fifteen each run along both sides of Winchendon Road. Number 14 is east of Ashburnham State Forest, and number 15 is north of Ashburnham State Forest and encompasses the already developed area off Hunter Avenue.
16- Number 16 is very near to the center of Town on Central Street.

Site 1 and 9 were suggested for "single-family cluster" development, and site 12 was suggested for senior housing. All of the rest were suggested for affordable and market rate housing.

Of all of the sites, numbers 13,14,15, are the most suitable for affordable, multi-family, and senior housing because the sewer and water infrastructure is already in place.

Number 16 would be within a short walking distance of the stores and services in the center of Town, and would be ideal for seniors, especially those who don't drive.


Ashburnham, MA:
Preliminary Future Housing Map
Wallace Pond
Lake Watatic
Sunset Lake
Lower Naukeag Lake
Upper Naukeag Lake
Lincoln Pond
Winnekeag Lake
Stodge Meadow Pond
Ward Pond
Watatic Pond
Site 1 is near Blueberry Hill on the West side of Stonewall Rd that was suggested for "Single-Family Detached Cluster Housing"
Site 2 is on both sides of Steel Rd where it meets Ashby Road (Rt 101) and Old Steele Rd near Ward Pond
Sites 3 & 4 are along Rindge Turnpike with #3 being at Wagg Rd near Marble Pond, and #4 being farther Southeast on both sides of Rindge Turnpike
Site 5 runs along Russell Hill Rd on both sides between Crosby Rd and Stage Coach Rd
Site 6 is along the north side of Jewell Hill Rd, East of Blackburn Village, and surrounds the already developed areas of Gibson Rd and Kallman Rd
Site 7 runs along both sides of Willard Rd from Newton Rd East and Southeast near the Westminster Town Line
Sites 8 & 9 overlap and encompass a large area that starts at Central St and extends to Newton Rd, and South along both sides of Cashman Hill Road almost to Westminster and Woods Rd
Site 10 follows along the North side of Central St (Route 101) and Center St from Cote Ave North including Foristall Rd and the intersection of Old County Rd, Route 101, and Turnpike Rd
Sites 11 & 12 are small sites that are nearly adjacent on the Northwest side of Gardner Rd and Center St (Rt 101) and coming together at S Main St near Whitney Pond
Site 13 is on both sides of Winchendon Rd where it meets Main St at Lashua Rd
Site 16 is very near the center of the Town on Central St
Sites 14 & 15 each runs along both sides of Winchendon Rd. #14 is East of Ashburnham State Forest, and #15 is North of Ashburnham State Forest and encompasses the already developed area off Hunter Ave
Water & Sewer Infrastructure
Housing
Single Family Cluster
Senior Housing
Police Station
Stevens Memorial Library
Town Hall
Fire Station
Briggs ES
Oakmont Regional HS
Overlook MS
Legend
Town Boundaries
Major Roads
Roads
Rail Lines
Streams & Rivers
Lakes & Ponds
Municipal Buildings
Residential Zoning
Residential Land Use
Developable Lands
Community Forum Data
Housing
Water & Sewer Infrastructure
Open Space by Ownership
State
Municipal
Private
DISCLAIMER: The information depicted on this map is for planning purposes only. All data are representational and are not adequate for boundary definition, regulatory interpretation, or parcel-based analysis. The community forum data were obtained from hand drawn maps and are only general approximations.
This program has been funded through a Community Development Plan grant authorized by former Governor Paul Cellucci, through Executive Order 418 signed in January 2000. Funding in the amount of $50,000 has been made available to the community from the Massachusetts Department of Housing and Community Development, Executive Office of Environmental Affairs and Executive Office of Transportation and Construction. Technical assistance has been made available from the Massachusetts Dept. of Economic Development.
06 03 0 06 12 Miles


Ashburnham, MA:
GIS Land Use Suitability Map
Wallace Pond
Lake Watatic
Sunset Lake
Lower Naukeag Lake
Upper Naukeag Lake
Lincoln Pond
Winnekeag Lake
Stodge Meadow Pond
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Site 5 runs along Russell Hill Rd on both sides between Crosby Rd and Stage Coach Rd
A National Register Historic District has been located on Russell Hill Road east of its intersection with Crosby Road
Stevens Memorial Library
Police Station
Town Hall
Fire Station
Sites 14 & 15 each runs along both sides of Winchendon Rd. #14 is East of Ashburnham State Forest, and #15 is North of Ashburnham State Forest and encompasses the already developed area off Hunter Ave
Town services should be developed at the intersection of Winchendon Road and Hunter Avenue
Site 13 is on both sides of Winchendon Rd where it meets Main St at Lashua Rd
Rehabilitation of a vacant factory (formerly Spectro-Coating, Inc. and Advanced Cable Ties, Inc.) into senior housing or mixed use has been identified as a need. The site is under new ownership and the community awaits redevelopment
Site 10 follows along the North side of Central St (Route 101) and Center St from Cote Ave North including Forestall Rd and the intersection of Old County Rd, Route 101, and Turnpike Rd
Sites 11 & 12 are small sites that are nearly adjacent on the Northwest side of Gardner Rd and Center St (Rt 101) and coming together at S Main St near Whitney Pond
An industrial park should be developed along Rt 101 and High Street in South Ashburnham
Briggs ES
Oakmont Regional HS
Overlook MS
Site 6 is along the north side of Jewell Hill Rd, East of Blackburn Village, and surrounds the already developed areas of Gibson Rd and Kallinen Rd
Commercial and mixed uses exist east of the Town Center on Route 12. A National Register Historic District has been located here
Site 16 is very near the center of the Town on Central St
Site 7runs along both sides of Willard Rd from Newton Rd East and Southeast near the Westminster Town Line
Sites 8 & 9 overlap and encompass a large area that starts at Central St and extends to Newton Rd, and South along both sides of Cashman Hill Road almost to Westminster and Woods Rd
Town services should be developed on Williams Road north of Platts Road and south of Center and Central Streets
While the land at the intersection of Main Street South and Westminster St is zoned Residential-A, this land should be examined for existing and/or future commercial and/or industrial uses
Light Industrial uses should be encouraged along the railroad in South Ashburnham
Mixed Use businesses should be allowed on Murray Road
Legend
Town Boundaries
Roads
Rail Lines
Streams & Rivers
Lakes & Ponds
Municipal Buildings
Developable Lands (From Buildout)
Developed Lands (From Current Land Use)
Absolute Constraints
Community Forum Data
Economic Development
Housing
Value for Protection
1 - 3 Resources Present
4 - 5
6 - 7
8 - 11
12 - 16
** Anything outside of the Developable Lands area is considered to be developed or have some type of absolute development constraint.
* Any areas of blank (White) space were considered to be undevelopable by the town at the time of the buildout process.
0 .3 .6 0 .6 1.2 Miles
DATA SOURCES: MassGIS, Mass. DEP, the MRPC and the Ashburnham Conservation Trust.
DISCLAIMER: The information depicted on this map is for planning purposes only. All data are representational and are not adequate for boundary definition, regulatory interpretation, or parcel-based analysis. The community forum data were obtained from hand drawn maps and are only general approximations.
This program has been funded through a Community Development Plan grant authorized by former Governor Paul Cellucci, through Executive Order 418 signed in January 2000. Funding in the amount of $30,000 has been made available to the community from the Massachusetts Department of Housing and Community Development, Executive Office of Environmental Affairs and Executive Office of Transportation and Construction. Technical assistance has been made available from the Massachusetts Dept. of Economic Development.

IV. OPEN SPACE AND RESOURCE PROTECTION ELEMENT

The Open Space Element of the Community Development Plan identifies the lands in the community deemed critical to sustaining its water supply, water quality and natural resources, in an effort to determine the ecological carrying capacity of the community and the availability of water resources to support alternative buildout scenarios. Siting commercial and industrial zoning away from aquifers or other areas critical to sustaining the existing and potential public water supplies is important and the community seeks to achieve this goal by balancing these interests with awareness and foresight. The Plan also illustrates that the health of the natural environment and the quality of life in the community require protection of wildlife habit to preserve the Natural Heritage, while balancing the social and economic and economic needs and land uses within the community.

The open space and resource protection element outlines the strategies to promote quality of life, preserve community character, protect scenic landscapes and natural resources, provide recreational opportunities, and define where new development, such as additional housing units, or industrial parks, can be provided with minimal detrimental effect upon these community assets.

The Plan is based upon an analysis of the suitability of land uses to the environment in which they are placed. The GIS-based Land Use Suitability Maps illustrate the types and locations of natural resources and their sensitivity to development. It also delineates areas that are most suited for additional housing, commercial, retail, industrial, transportation, or other development; and the priorities for protection or sensitive development for habitat preservation, protection of water resources, provision of recreational opportunities, preservation of vistas, conservation of landscapes that are elements of a community's character, or other purpose.

A. SUMMARY OF CONCURRENT PLANNING EFFORTS

1. Ashburnham Open Space Plan 2001

Ashburnham is a rural community on the New Hampshire border, known for its forests, rolling hills, farmland, wetlands and lakes. The Town sits astride the watershed divide between the Millers River and the Nashua River. The dominant landscape features in the town include Mount Watatic, which hosts the Mid State Trail and the Wapack Trail, Upper Naukeag Lake, which serves as the public water supply for Ashburnham and Winchendon, and Lower Naukeag Lake, a recreational lake rimmed with private residences. The numerous lakes and ponds in the town attract summer vacationers and part-time residents and have increased the growth pressure on the community. Concerns for water quality in the lakes have grown with the increased demand on on-site septic systems, many of which are antiquated, outdated, and failing.

The primary goal for the Town is to preserve the rural and historic character of the town by protecting its natural and water resources through land acquisition. Key objectives include:

- Developing a ranking matrix and prioritizing undeveloped land for acquisition, targeting links between protected open space and known wildlife corridors, lands in the Chapter 61 tax abatement programs, and large parcels of land.
- Devising protection strategies and policies for protecting rivers streams and bodies of water.
- Orchestrating a coordinated review of existing zoning and general bylaws regarding their impact on the rural and historic nature of the town, pursue appropriate changes.
- Modify the Wetlands Protection Bylaw, Improve the Scenic Roads Bylaw and establish an Open Space Bylaw.
- Work with local land trusts, owners of large parcels of land, state and regional agencies and other organizations whose interest is to preserve open space, to obtain and protect open space and wildlife corridors.
- Maintain existing recreational facilities and create additional facilities and opportunities, including a trails network linking protected open space, reusing old rail beds for walking and biking paths, and establishing public access to waterways.

2. The Massachusetts Watershed Initiative

The Massachusetts Watershed Initiative (MWI) was a state program developed by the Executive Office of Environmental Affairs (EOEA) to take a watershed approach to improving water quality and protecting natural resources. The Initiative was a cooperative partnership between environmental organizations, non-profit and local citizen groups, businesses, and state and federal agencies that work together to protect the watersheds in the state. The Millers Basin Team, led by Alice Rojko, and the Nashua Basin Team, led by Jo Anne Carr, both of EOEA, and guided by the efforts of the Millers River Watershed Council and the Nashua River Watershed Association, had responsibility for implementing the priorities of the Executive Office of Environmental Affairs.

The teams coordinated a number of efforts for these two river basins since inception of the MWI in 1993, including development of Water Quality Sampling and Volunteer Monitoring Programs, Hydrologic Assessments of flow levels and safe yields by tributary sub-basins to identify stressed sub-watersheds and habitats, assessments of watershed habitats to develop an approach for prioritizing regional land protection, and Five Year Action Plans outlining specific strategies to mitigate priority watershed problems and directing agencies, staff and other resources to best accomplish these strategies.

In 2003, the Watershed Initiative was formally dissolved at the Executive Office of Environmental Affairs, however, the watershed perspective framework established by the initiative remain in place at the state agencies responsible for its implementation, and the priorities identified by the Basin Teams still apply.

3. Greater Gardner Regional Growth Plan

Under funding from the Massachusetts Department of Housing and Community Development, Municipal Incentive Grants Program, and the Massachusetts Executive Office of Environmental Affairs, Planning for Growth Program, the communities of Greater Gardner partnered with the Montachusett Regional Planning Commission (MRPC) and a consultant team led by Daylor Consulting Group of Braintree to develop a strategy to address regional issues resulting from impacts of growth and development. The planning team maintained a high level of public involvement throughout the planning process. The recommended strategies are aimed at accommodating new growth that is sensitive to the character, natural resources and fiscal stability of Greater Gardner communities.

The goals of the Greater Gardner Sustainable Growth Management Plan were to control sprawling patterns of development through better focus and integration of land uses by:

- Protecting water resources, agricultural and forested lands, wildlife habitat, and recreational land, and accommodating growth where the environment can support it.
- Promoting more compact development patterns to maintain traditional New England village patterns and to reduce the reliance on automobiles in the region.
- Providing a variety of housing options across a broad range of incomes and lifestyle choices,
- Revitalizing traditional sources of economic activity to provide economic opportunities and good jobs within the region. Establishing a more balanced tax base through appropriately sited commercial and industrial uses, and a mix of residential design options was seen as a means of stabilizing the finances of the communities.
- Regaining and expanding local public access to outdoor resources such as rivers, ponds, woods, and scenic places.
- Establishing a transportation system that supports the region's desired pattern of development and conservation.
- Instituting sustainable waste management systems.

Elements of the Plan included evaluation of existing growth management laws to measure their efficacy and their quantitative impacts as determined through the build-out analysis; identification of appropriate tools to accomplish one or more of the goals and objectives; and recommendation of Community-specific growth management strategies.

The Growth Management Plan offered several strategies for Ashburnham to protect open space and natural resources and preserve scenic character and public water supplies.

To preserve open space and Town character, the plan recommended that the Town work with its large landowners and land trusts to identify preservation options and alternatives to development, before the landowners decide to sell. The Plan also recommended adoption of several bylaws to address design concerns arising from development occurring on Approval-Not-Required lots.

- A local scenic roadways bylaw to regulate the cutting of trees and clearing of vegetation within the front setback of dwellings, and alteration of stone walls within the right-of-way of designated scenic roads.[3]

- An Access Management Bylaw to control rampant ANR development by limiting access to public ways to one curb cut per 1000 feet or one curb cut per pre-existing lot.

- A Scenic Corridor Overlay District with established design standards and a design review requirement to regulate such design characteristics as preservation of viewsheds and sight lines and architectural design of buildings along designated scenic roadways.[4]

- An effective Cluster Zoning bylaw, in anticipation of new subdivisions, that requires open space set asides, proper septic management, and design standards to protect rural character.

To protect the surface and groundwater resources Ashburnham shares with its neighbors Gardner, Winchendon and Westminster the Plan recommended that the Ashburnham Board of Selectmen ratify a Statement of Collaboration, which is a multi-town agreement to examine the critical issue of water supply protection.

The Plan stated that the existing industrial district in South Ashburnham has very poor access, and is not conducive to attracting desirable industrial development, and recommended that town leaders identify suitable locations for new industrial development and revise its zoning districts accordingly. Potentially suitable locations may include the villages of Ashburnham and South Ashburnham for office space and other non-intensive commercial uses, and portions of Route 12 for a wider range of industrial uses.

Residentially zoned land in Ashburnham requires a minimum lot size of 45,000 or 60,000 s.f., encouraging the development of large single-family houses in a land-consumptive sprawling pattern. The Plan encouraged the Town to consider establishing or expanding one or more village center areas to encourage compact growth patterns and a mix of residential and commercial uses that stabilizes or improves town finances. Congregate elderly housing and smaller homes for childless couples were recommended since they are better suited to smaller lots and higher densities. The Plan offered a prototype South Ashburnham village plan that coordinated cluster developments on adjacent parcels to create entire compact neighborhoods, centered around schools and/or stores, and surrounded by ample open space.

4. 1995 to 2020 Vision for the Nashua River Watershed (1995)

The *1995 to 2020 Vision for the Nashua River Watershed* was developed by the Nashua River Watershed Association (NRWA) to restore and protect water quality, conserve open spaces and encourage careful land use with well-planned development. This comprehensive plan listed numerous strategies to address growth, water quality issues, and land protection. The plan recommended actions to ensure that existing and potential drinking water resources were protected from contamination and policies to ensure that water supply withdrawals are balanced with water flows and aquifer capacity, so as not to deplete the resources. The plan also recommended strategies to clean up waters already polluted, through education and advocacy, best management practices for wastewater treatment, solid waste management, and septic system management, control of stormwater runoff. Recommendations for land and water stewardship, conservation, and acquisition were also included in the plan.

[3] (authorized by the Scenic Road Act (Massachusetts General Laws Chapter 40, Section 15C)
[4] As long as the district does not address dimensional requirements, it can be adopted as part of the General Bylaw, meaning that it requires only a majority vote at Town Meeting and is not subject to grandfathering provisions.

5. Nashua River Watershed Growth Plan 1998

The Nashua River Watershed Growth Plan, completed in July of 1998, by the Montachusett Regional Planning Commission, focused on how municipal governments can better manage growth in a regional context.[5] Through cooperative partnerships and the guidance of a Regional Growth Task Force MRPC assessed the impacts of rapid growth, and developed a series of recommendations for managing growth in the watershed communities, such as encouraging more compact, dense development patterns that conserve open space, through thoughtful land use and conservation of the environment.[6]

The goals and recommendations of this plan drew upon the efforts of many Nashua Watershed communities to develop their individual comprehensive plans, as well as the *1995 to 2020 Vision for the Nashua River Watershed* by the Nashua River Watershed Association (NRWA). Elements of the plan included thoughtful consideration of land use and conservation of the natural environment and of open spaces. Land Use strategies included preservation of the rural character in the communities, redevelopment of downtowns in Urban Areas and Villages, promotion of compact and varied building including provisions for accessory apartments and a variety of housing types in a mix of price ranges.

Strategies to preserve rural character included creation of Historic Districts and protection of farmland through USDA and Massachusetts Department of Food and Agriculture (APR) Programs, conservation restrictions.

Downtown Redevelopment strategies included streetscape improvements, creation of distinct Downtown Zoning Districts, promotion of development in Areas with existing infrastructure, and redevelopment of existing structures through Brownfields Initiatives.

Communities were encouraged to develop Community Growth Plans to guide their efforts to implement these strategies, and to make greater use of Zoning Regulations, such as: Scenic Road Zoning Bylaws or Ordinances , Cluster Zoning (Open Space Requirements), Performance Zoning, Site Plan Approval, Design Guidelines, and Signage Controls.

Conservation strategies included development of local Open Space & Recreation Plans, creation of linkages such as greenways and wildlife corridors, and use of Land Trusts to protect valued properties. Communities were encouraged to reconsider their Large Lot Zoning and dimensional requirements and to consider the use of Cluster Zoning with open space requirements instead.

To protect water quality in the region, the plan recommended that the communities aim for a more sustainable development pattern that preserves aquifer recharge zones as open space and uses best management practices to mitigate the impacts of development. Tools included use of zoning controls, conservation measures, and educational programs. Local controls for the protection of wetlands that go beyond the requirements of the Wetlands Protection Act were strongly encouraged as a means of preserving flood control capacity, preventing storm damage, and protecting waters containing fisheries.

At the time the plan went to print, Ashburnham had already made significant progress in applying the growth management tools discussed in the plan.

6. Water Quality Assessments

Under the Federal Clean Water Act (305b), the Massachusetts Department of Environmental Protection (DEP) is mandated to monitor, analyze, and report on the quality of statewide water resources to the U.S. Environmental Protection Agency (EPA), the U.S. Congress, and the public every two years. Waterbodies are rated into several categories based upon the federal goals and state determined standards of water quality. Under Section 303(d) of the

[5] The Nashua River Watershed Growth Plan, the Montachusett Regional Planning Commission, July 28, 1998. funded through the Massachusetts Executive Office of Environmental Affairs Planning for Growth Program

[6] The scope of the plan was limited to fifteen MRPC communities: Ashburnham, Ashby, Ayer, Clinton, Fitchburg, Gardner, Groton, Harvard, Lancaster, Leominster, Lunenburg, Shirley, Sterling, Townsend and Westminster.

Federal Clean Water Act, the State must submit a list of waters that are not meeting their water quality standards to EPA for review and approval every two years.

The State must develop Total Maximum Daily Loads (TDMLs) for parameters of concern and establish pollution control strategies to restore the waters to meet water quality standards. DEP prepared Total Maximum Daily Load (TMDL) Reports for lakes that fail to meet the state's Water Quality Standards for a variety of pollutants and stressors including low dissolved oxygen, turbidity, nutrients, and an over-abundance of nuisance aquatic plants. A TMDL is a calculation of the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards, and an allocation of that amount to the pollutant's sources. This TMDL is directed at control of excessive algae and weeds, which limit most uses of the waterbody, including swimming, fishing, and boating.

All of the pollutants and stressors are indicators of nutrient enriched systems, indicating eutrophication. In freshwater systems, phosphorus is the primary nutrient of concern. The TMDL re-ports establish a phosphorus limit for each lake and outline corrective actions to achieve that goal. Issues addressed include Title 5 compliance, Phase II Stormwater permitting issues, sewer management, maintenance of roads, lake management issues, and compliance with the Wetlands Protection Act.

7. Millers River Regional Open Space Plan

The Millers River Watershed was granted funding under the Massachusetts Watershed Initiative to develop a Regional Open Space Plan, affording the watershed communities an opportunity to work together cooperatively to bring about a shared vision for open space and recreation. McGregor & Associates was commissioned to develop the regional open space plan. The plan is likely to include recommendations for additional trail and habitat links, priorities for open space preservation, and strategies for increase open space funding in an era of state budget cuts, among other open space management objectives.

On May 20, 2003 the consultants held a Public Forum on the Regional Open Space Plan at which representatives from local communities participated in a plenary discussion and breakout groups to discuss local and regional open space and recreation goals, and gave suggestions for an action plan to meet regionally compatible goals and objectives.

MacGregor and Associates also reviewed the open space and recreation Plans of each of the communities in the Watershed. Just under half of the completed plans we reviewed contained an explicit reference to the importance of working landscapes, existing farms, and active forestry management. Similarly, about half noted the importance of acquiring or preserving new open space, while the other half downplayed or were silent on the importance of this, stressing instead the maintenance and management of existing properties, or the importance of private ownership.

8. Nashua River Five-Year Watershed Action Plan

The former Massachusetts Watershed Initiative (MWI) Nashua River Watershed Team recently completed a Five-Year Watershed Action Plan (WAP) outlining specific strategies to mitigate priority watershed problems in several categories: Water Quality, Water Quantity, Habitat, Bio-diversity and Open Space, Growth Management, Local Capacity Building, and Recreation and Access. The action plan relates water issues to regional growth and development and provides the framework for cooperative efforts to mitigate watershed problems and implement actions to protect and restore natural resources.

Major problems in the region stem from unplanned development and consumptive land use development patterns resulting from rapid population growth over the past several decades. Water Quality problems in the region include nonpoint source pollution, combined sewer overflows (CSO) in Fitchburg, illicit discharge of sewage to surface waters, high pathogen counts and toxicity issues in North Nashua and main stem segments and tributaries, leaching of toxic chemicals from old waste disposal sites, contaminated sediments, excessive inputs of plant nutrients and levels of phosphorus throughout the River, eutrophication and non-native plant species in several lakes, flooding, deteriorating dams, and inappropriately located development.

The plan addresses alternative technologies, structural and nonstructural solutions, and sources of funding and technical assistance, and provides recommendations for regulatory decisions and a funding plan and schedule for com-

pleting actions. The plan also assigns roles and responsibilities for implementing the actions among the various stakeholders, within and outside the watershed, and designates lead persons or organizations. All significant partners in the watershed will be involved in its implementation over the next five-year period and in pinpointing areas still in need of research and actions.

The primary goals of the Five Year Action Plan are to:

- Maintain the high level of water quality in the tributaries and return degraded waters to their designated uses pursuant to State Water Quality Standards.

- Protect and manage in-stream flow and groundwater resources throughout the watershed to provide high quality drinking water supply sources and aquatic and riparian habitat.

- Support local growth planning efforts and encourage careful land use with well-planned development in order to protect priority land areas for forest, agriculture, habitat, water resources and recreational values.

Recommended actions for Ashburnham included:

Water Quality

- Protect high water quality in the sub-basin
- Monitor NPDES permits

Open Space

- Monitor Chapter 61 lands for potential acquisition

Capacity-building

- Implement Phase III Stormwater Program

Recreation

- Work to ensure permanent easements for the Mid-state Trail
- Promote the extension of the Gardner to Winchendon rail trail through Ashburnham
- Develop public swimming site in Ashburnham
- Promote protection of lands on the Mid State Trail

9. Millers River Five-Year Watershed Action Plan

The Millers River Watershed Team received a grant from the Executive Office of Environmental Affairs to conduct a one-year study of current conditions in the watershed and develop a Five-Year Watershed Action Plan (WAP) for seven elements: Outreach & Education, Local Capacity Building, Water Quality, Water Quantity, Habitat, Open Space and Recreation. Franklin Regional Council of Governments and Millers River Environmental Center have partnered together to develop the plan. All significant partners in the watershed will be involved in this process and will aid in identifying the main issues, pinpointing areas still in need of research and prioritizing actions over the next five-year period.

The watershed assessment and action plan will relate water issues to regional growth and development and provide the framework for cooperative efforts to mitigate watershed problems define actions to protect and restore natural resources. The plan will assess alternative technologies, structural and nonstructural solutions, and sources of funding and technical assistance, and provide recommendations for regulatory decisions and a funding plan and schedule for completing actions. The plan will also assign roles and responsibilities for implementing the actions among the various stakeholders, within and outside the watershed, and designate lead persons or organizations. Expected completion will be June of 2004. Project Tasks will include:

1. Identify Stakeholders: Develop a contact list for mailings and email consisting of public officials, land trusts, citizen/volunteer monitoring groups, watershed associations, businesses, farm groups, builders and realtors associations, hunting and sporting organizations, and others.

2. Form an Advisory Committee: Recruit members from Millers Team and the 11 municipalities in the watershed, including municipal officials, local environmental groups, foresters, citizen activists, and others.

3. Data Collection: Gather existing studies, plans, maps, and reports for the watershed that address environmental planning, water quality, water quantity, water use and conservation, open space, recreation, habitat (especially fish migration), non-point source pollution, outreach and education, growth, and stormwater.

4. Data Assessment: The assembled data will be analyzed and summarized in a State of the Millers River Watershed: Draft Natural Resources Assessment Report. This report will include the following 5 GIS maps to support and illustrate the summaries and evaluations: Ecosystem Integrity and Biological Diversity; Water Resources and Wildlife Habitat; Protected Open Space and Current & Potential Public Access; Growth Trends; and Non-point Source Pollution Assessment.

5. Develop List of Priority Actions and the Five-Year Watershed Action Plan for the Millers River Watershed: Using the Draft Assessment Report, FRCOG, MREC and the Advisory Committee will develop a list of Priority Actions. Three Public Forums and telephone interviews with stakeholders will be used to encourage and obtain public review of the Priority Actions and assist in the development of the Five-Year Watershed Action Plan.

6. Publication of Recommendations: The Watershed Action Plan will include the five GIS theme maps discussed above plus a Five-Year Action Plan Map that will present the List of Priority Actions. MREC staff will develop a series of Fact Sheets and Information Packets that present the findings of the Watershed Action Plan in a format that is useful for local residents, educators, and watershed activists.

B. WATER RESOURCES

1. Topography, Geology, and Soils

Geologic activity and glacial sculpting left a deep imprint on Ashburnham's topography. Alternating periods of volcanic activity, shifting faults and erosion led to the formation, in the Silurian and Devonian ages almost 500 million years ago, of the igneous and metamorphic rock that is characteristic of the Gardner Terrain. This bedrock is often at or near the surface and was deeply worn by repeated glaciation.

Glacial sculpting wore deep grooves in the land, creating the rolling, hilly terrain that dominates the landscape today. Great ice sheets, estimated to have a thickness of up to two miles, scraped and wore deep grooves into the land during the Pleistocene Era, 11,000 to 1.8 million years ago. As the glaciers advanced, materials scraped from the underlying bedrock were carried south. As temperatures warmed, the retreating ice sheets left glacial debris, eskers, drumlins and moraines in their wake. At 1,832 feet above sea level, Mount Watatic is Ashburnham's highest peak. Smaller mountains and hills, including Mount Watatic, Little Watatic Mountain, Jewell Hill, and Packard Hill, contribute to the area's scenic beauty and recreational resources. While providing excellent wildlife habitat and aesthetic beauty, Ashburnham's steep slopes, many of which contain Marlow and Marlow-Peru Soil Associations, are largely unsuitable for development.

Figure 1: Water Resources Map, identifies locations of various deposits of sand, gravel and other materials in Ashburnham. Glacial tills, consisting of unconsolidated sand, gravel, silt and clay, are remnants of the Pleistocene Era. Ashburnham's floodplain alluvium, consisting of mainly fine sand, silt and sometimes-coarse sand, largely resulted from the deposition of glacial lakes and regular flooding of rivers and streams.

Since soils have restrictive properties, such as permeability, slope, stone content, organic matter, salt content, chemical and mineral composition, water table level, and drainage capacity, that impact the application of specific uses, it is important to identify them. The United States Department of Agriculture's Soil Conservation Service is in the

process of updating the Soil Survey for communities within the Northwestern portion of Worcester County, including Ashburnham. However, the information is not yet available to the public. Therefore, the most recent soil survey information available for analysis was conducted in 1981. That Survey identified Marlow and Marlow-Peru Associations as the dominant soil types in Ashburnham, covering a total of 53.8% of the Town's area and underlying most of western Ashburnham. Characterized by loamy textures, a slowly permeable hardpan 24 to 36 inches below the surface, and the presence of numerous stones and boulders, these soils are poor in terms of topsoil, susceptible to erosion and fairly unconsolidated. They tend to be moist for part of the year and have severe septic limitations due to wetness and slow percolation. These attributes limit the development potential of much of the Town.

2. Watersheds

The Town of Ashburnham sits astride three watersheds (See **Figure 1: Water Resources Map** for watershed boundaries)- the Merrimack River Watershed, the Nashua River Watershed, and the Millers River Watershed. Ashburnham sits near the headwaters of these major water systems, therefore the community plays an important role in regulating their water quality and stream flow.

The Merrimack River flows 115 miles from its origin at the confluence of the Pemigewasset River and Winnipesaukee River in Franklin, New Hampshire until it merges with the Atlantic Ocean in Newburyport, Massachusetts. Encompassing the northeastern portion of Ashburnham, the Merrimack River Watershed drains an area of 5,010 square miles and includes all or a portion of two-hundred and three communities, ranging from small, rural towns to the industrial cities of Manchester, New Hampshire and Lowell, Massachusetts. The upper portion of the watershed is largely undeveloped and exhibits a high water quality. However, much of the river flowing downstream of Manchester, New Hampshire struggles with poor water quality as a direct result of development, a large amount of impervious surfaces and combined sewer overflows.

The Nashua River flows northeast along a fault valley that extends from the Quinapoxet River in Holden, Massachusetts to the Merrimack River, in Nashua, New Hampshire. Encompassing the southeastern portion of Ashburnham, the Nashua River Watershed drains an area of approximately 538 square miles and includes all or a portion of thirty-one municipalities, including the Cities of Gardner, Fitchburg and Leominster. Eleven wastewater treatment facilities constructed within the watershed effectively control major pollution discharges, however non-point source pollution and the urbanization of the watershed are ongoing threats to water quality and quantity.

During the glacial age, great sheets of ice slowly flowed south, carving out the soft sedimentary rock from the harder bedrock, leaving rift valleys that today form the tributaries of these two rivers. At the end of the glacial age, ancient glacial lakes formed as the glaciers melted. Glacial deposits of sand and gravel blocked the flow of the river, creating glacial lakes up to 200 feet deep that filled the present day Nashua River Valley and Tully River Valley in Royalston and Athol. Over thousands of years, sediments ran off surrounding hills and collected as thick layers of sand, silt and gravel on the lake bottom. As the glaciers receded, floodwaters washed through these deposits, draining the lakes, and leaving behind large deposits of till, sand, and gravel that form the basis of many of the region's water supplies.

Originating in New Hampshire, the Millers River flows westward, ultimately merging with the Connecticut River. Encompassing the northwestern portion of Ashburnham, the Millers River Watershed drains an area of approximately 392 square miles and includes all or a portion of seventeen municipalities. Characterized by mill towns that developed to harness the power of the Millers River and its tributary streams, the Watershed is more remote than the neighboring Nashua River Watershed. However, water bodies within the catchment area are plagued by the similar threats, including the legacy of industrialism and non-point source pollution. PCB's, chlorination, heavy metals, erosion, landfill leachate, storm water runoff, and acid rain are some pollutants that challenge communities within this Watershed.

3. Rivers, Streams and Ponds

While Ashburnham does not contain significant rivers, several small rivers and streams flow within the Town's borders, linking nearly twenty lakes and ponds. Many of these water corridors are unnamed, however two are worthy of note.

Lake Wampanoag is the headwaters of the Whitman River, which flows in a southeasterly direction a distance of 8.4 miles through the Town of Westminster before merging with the North Nashua River in Fitchburg, just south of Snow Mills Pond. A low percentage of impervious surfaces and large amount of permanently protected open space means that the water quality of the Whitman River and its tributary streams is quite high. The river is well-oxygenated and relatively free of coliform bacteria, according to the Nashua River Watershed's 2000 Volunteer Monitoring Water Quality Report. According to the 1998 Nashua River Watershed Report Card, the presence of vast amounts of algae, which may indicate elevated nutrient levels, prompted placement of the River on "Alert Status". A considerable amount of suspended sediments, possibly from the runoff of sand from roadways, is also a concern. MassWildlife stocks the Whitman River with trout on an annual basis.

Phillips Brook flows south from Ashburnham, through Westminster to its confluence with the North Branch Nashua River in Fitchburg, and finally south of McTaggarts Pond at the junction of Route 12 and Route 31. Phillips Brook is approximately 8 miles in length. Lake Winnekeag is the headwaters of Phillips Brook, and is in turn fed, in part, by Lincoln Pond. Brown Brook and Laws Brook are feeder streams to Phillips Brook. A shoreline survey conducted of Phillips Brook in 1999 indicated that the brook was in good condition overall. Phillips Brook is classified as a well-oxygenated Class-B waterbody, and a warm water fishery. Cushing Academy and Flo Chemical Corporation hold NPDES permits for minor discharge of industrial effluent into Phillips Brook. An impoundment of Phillips Brook created Bresnahan Pool, the only public beach facility in Ashburnham. The beach was closed several years ago due to severe damage.

Known as the "Town of Many Lakes", Ashburnham's lakes and ponds, together with nine town and state-owned forests, help distinguish the community as a vacation paradise. The Town's lakes and ponds, comprising a total of 1.74 square miles, flow into the various watershed systems. Lakes draining into the Millers River Watershed are: Lake Watatic, Sunset Lake, Wallace Pond, Lower Naukeag Lake, Upper Naukeag Lake, and Cheshire Pond. Lakes draining into the Nashua River Watershed are: Winnekeag Lake, Lincoln Pond (not named in the map), Factory Village Pond, Whitman Reservoir and Lake Wampanoag. Lakes draining into the Merrimac River Watershed are: Watatic Pond, Ward Pond, Marble Pond and Stodge Meadow Pond. A brief description of Ashburnham's major lakes and ponds are as follows:

Major Water Bodies	**Acreage**	**Access**	**Shoreline Development**
Sunset Lake	300	No	High
Upper Naukeag Lake	240	No	Low
Lower Naukeag Lake	232	No	High
Lake Watatic	161	No	High
Stodge Meadow Pond	128	No	High
Winnekeag Lake	118	No	High
Billy Ward Pond	54	No	High
Little Watatic Pond	25	Yes	Low

Lesser ponds include Mud Pond, Wallace Pond, and Cheshire Pond at the headwaters of the Millers River. Lake Wampanoag serves the city of Gardner. Whitney Pond sits on the Whitman River just north of Route 101. Lincoln Pond flows to Winnekeag Lake. Marble Pond is associated with Stodge Meadow Pond. Factory Village Pond is a man-made pond that serves the city of Fitchburg. Unfortunately, public access to the lakes and ponds is practically non-existent. Those living along their shores and members of lake associations do enjoy the many recreation opportunities afforded by private access. For example, Sunset Lake contains Ripple Beach, which is owned and maintained by the Far Hills Association. It consists of a sandy beach, swing set, picnic tables, benches, barbecue pit, and floating dock.

4. Wetlands and wetland buffer areas

Many wetland types, from vernal pools and forested wetlands to marshes and floodplains, exist along Ashburnham's rivers, streams and ponds. Ashburnham has a total of 1,043 acres of wetlands, representing roughly 4% of the Town's total land area. Many of the Town's wetlands are located in the western part of Ashburnham, associated with the rivers and streams that link Lake Wampanoag, Cheshire Pond, Lower Naukeag Lake, Upper Naukeag Lake,

Sunset Lake, and Lake Watatic. A graphic depiction of Ashburnham's wetlands appears on the Water Resources Map.

Wetlands perform several crucial functions. Supporting approximately 43% of the nation's rare and endangered species, wetlands are home to a variety of flora and fauna. Wetlands are transitional areas between terrestrial and aquatic habitats. These hot spots of biological diversity are also nature's way of ensuring good water quality. They function as natural filters for surface waters and groundwater/aquifers in that they trap sediment and organic matter and absorb nutrients from water flowing through the vegetation, thus improving water quality. Wetlands are dynamic ecosystems that regulate water levels within a watershed, thus reducing flood and storm damage. The limited permeability of wetland soils causes ponding during heavy precipitation events, allowing for lower runoff rates. Because of these critical functions, it is important that Ashburnham identify and protect its wetlands and floodplains. Wetlands are defined under Section 404 of the Clean Water Act of 1972 as those areas that are inundated or saturated by ground water (hydrology) at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation (hydrophytes) typically adapted for life in saturated soil conditions (hydric soils). The Clean Water Act prohibits virtually any ground-disturbing activities within 100 feet of all wetlands unless approved through special permit.

In 1962 the Commonwealth of Massachusetts enacted the first coastal Wetland Protection Act (WPA) in the country. In 1996, the Rivers Protection Act added a new protected resource area and accompanying performance standards to the Wetlands Protection Act. In the early 1970's, the act was amended to include inland wetlands. The Act protects land under water bodies, banks, riverfront areas, bordering land subject to flooding, isolated land subject to flooding, certified vernal pools, coastal wetlands and bordering vegetated wetlands.[7]

Massachusetts General Laws Chapter 131 Section 40, defines wetlands by vegetation, hydrology and topography and groups all types of wetlands into one category known as Bordering Vegetated Wetlands (BVW). In Massachusetts, wetlands and associated buffer zones that border a surface water body or perennial rivers and streams are a protected natural resource. They are delineated based upon plant type and soil conditions. Different species of hydrophytic vegetation (i.e., plants that tolerate "wet conditions") serve as indicator plants commonly found in wetlands. BVW's must be comprised of at least 50% hydrophytic vegetation and be inundated with water at least 7 to 14 days during the growing season to be considered wetlands under the Massachusetts Wetland Protection Act. [8]

Ashburnham added a third layer of protection through adoption of The Wetland and Watershed Protection (W) District. The District prohibits uses detrimental to water quality, including the new construction of residential, business, wholesale and industrial, and scientific research and development uses. For the most part, public, semi-public, institutional, agricultural, and excavation uses are permitted.

5. Flood Hazard Areas

Historically floodplains have been desirable places for development to occur. Early industrialists seeking fast flowing water to power mills constructed their factories within the floodplain. Gradually homes and shops followed suit. However the attributes that made these areas attractive also put people and property at risk. Development within the floodplain places property in the path of floodwaters; as more of the surface is rendered impervious, it also reduces the amount of water that is absorbed into the ground. As a result, floodwaters tend to rise higher, causing extensive damage and even loss of life.

Fortunately, measures have been enacted to avoid some of the detrimental effects of building on Ashburnham's floodplains. The Federal Insurance Administration mapped Ashburnham's floodplains, the extent of which appears on the Water Resources Map. The preparation of these maps, along with the adoption of a special ordinance dealing with floodplain development, enables Ashburnham to participate in the National Flood Insurance Program (NFIP). The NFIP allows residents living in flood hazard areas to purchase flood insurance at a low cost.

The Town's Flood Plain District Bylaw helps ensure that floodplains continue to provide flood storage and recharge benefits. Within the floodway, development is allowed upon demonstration that the building will not result in a de-

[7] Protecting Wetlands in Massachusetts, http://state.ma.us/dep/consumer/protwet.htm
[8] Jackson, S. 1995. Delineating Bordering Vegetated Wetlands, Under the MAWPA

crease in flood storage capacity or increase in flood levels during the occurrence of a 100-year flood. Septic tanks, cesspools and leaching fields are *not* permitted within the floodplain. The Bylaw also specifies subdivision standards and regulates the placement of mobile homes within the floodway and Zone A1-19. In addition to this By-Law, passage of the Rivers Protection Act by the Massachusetts Legislature in 1996 ensures protection of a "riverfront area" within 200 feet of rivers and streams when they converge with an ocean, lake or pond. A variety of resources and grants are available under the Act to help acquire land bordering rivers and streams, abate non-point source pollution and promote public awareness of environmental issues.

6. Aquifers and Recharge Areas

Aquifers are important water resources that exist underground. Aquifers are found where land surfaces are permeable and the storage and transmission of water can take place. Many of Ashburnham's residences and businesses rely on water in aquifers for drinking and household uses, accessing it via wells. The Water Resources Map shows major groundwater resources in the Town, including two medium-yield aquifers. Medium-yield aquifers can yield 100-300 gallons per minute. Unfortunately, the recharge areas of Ashburnham's aquifers have not yet been identified or mapped. In order to avoid harmful land use practices that will compromise the water quality of these aquifers, the determination and protection of recharge zones should be viewed as a top priority.

C. WILDLIFE HABITAT

1. Wildlife

A host of wildlife abounds within Ashburnham's borders, largely owing to the diversity of its major habitat types. Ashburnham's wooded and mountainous areas are home to both large and small mammals, birds, reptiles, and insects. Each September, a variety of migrating waterfowl, shore birds, passerines, and raptors are observed flying over Mount Watatic. Rocky outcroppings are preferred den sites for gray fox, fisher, porcupine, and bobcat. Smaller animals, especially bats, seek shelter in caves or under overhangs. Black bear have been sited and coyote are often heard at night. Ashburnham's lakes, ponds, rivers, and streams support populations of river otters, wood ducks, loons, and several species of turtles and fish.

Ashburnham also provides habitat for wildlife species that are endangered, threatened, or considered to be of special concern by the Massachusetts Natural Heritage and Endangered Species Program. It is often the lack of an appropriate habitat that makes a species of plant or animal rare. The table below lists those state-listed rare species observed in Ashburnham.

Rare Species in Ashburnham

Taxonomic Group	Scientific Name	Common Name	Status	Most Recent Observation
Fish	Notropis bifrenatus	Bridle Shiner	SC	1996
Mussel	Alasmidonta undulata	Triangle Floater	SC	2001
Mussel	Strophitus undulatus	Creeper	SC	1997
Reptile	Clemmys guttata	Spotted Turtle	SC	1999
Reptile	Clemmys insculpta	Wood Turtle	SC	1994
Reptile	Emydoidea blandingii	Blanding's Turtle	T	2000
Bird	Botaurus lentiginosus	American Bittern	E	1987
Dragonfly/Damselfly	Enallagma laterale	New England Bluet	SC	1967
Dragonfly/Damselfly	Ophiogomphus aspersus	Brook Snaketail	SC	1997

Source: Natural Heritage and Endangered Species Program

Hunting of game species provides recreation opportunities for Ashburnham sportsmen and women. State-owned lands are open for hunting, and many acres of private property are also accessible. MassWildlife stocking programs augment upland game birds and other species at popular hunting areas throughout the region.

2. Special Habitats

Since many species rely on a variety of habitat types during different periods of their life cycle, species diversity is greatest in areas where several habitat types occur in close proximity to one another. When habitats are of high quality and ample quantity, wildlife populations thrive. The Massachusetts Natural Heritage & Endangered Species Program (NHESP), the state agency charged with protecting plants and animals listed as endangered, threatened or of special concern, maintains a Natural Heritage Database containing over 13,000 current and historical records of species and natural community occurrences for use in biological inventories and research, land protection efforts and environmental impact project reviews. The NHESP Geographic Information Systems (GIS) Department utilizes species and geographical information to inform rare species and habitat protection efforts and environmental review. NHESP-designated habitat areas in Ashburnham appear on Figure 2: Wildlife Habitat Map. The map includes the following classifications:

Priority Habitat for State-Listed Rare Species: These areas indicate the most important habitats for *all* state-listed rare species, including both upland and wetland species, and both plant and animal species. The Massachusetts Endangered Species Act protects priority habitats, and requires review by the Town Conservation Commission of proposed land uses that will impact these areas.

Estimated Habitat for Rare Wildlife: These wetland and adjacent upland habitats are used by state-listed rare wildlife, and regulated under the Massachusetts Wetlands Protection Act. Anyone proposing a project within an Estimated Habitat must undergo project review by NHESP.

Certified Vernal Pools: Among Ashburnham's important habitat features are vernal pools, seasonal water bodies occurring in isolated basins, which are usually wet during the spring and early summer. By late summer, a vernal pool is generally dry. The periodic drying does not support breeding populations of fish, but many organisms have evolved that must use vernal pools for various parts of their life cycle. The wood frog and all species of mole salamanders that occur in Massachusetts breed exclusively in vernal pools. Areas in the immediate vicinity of the pool also provide species with important non-breeding habitat functions, such as feeding, shelter and over-wintering sites. Vernal pools range in size from very small to very large, yet they are generally shallow (about three to four feet deep). Pools might be found in low areas of a forest, in the floodplain of a river or stream, within a vegetated wetland, in an open field, between coastal dunes, and in abandoned quarries or natural rock formations.

Certified vernal pools have been inventoried by local volunteers and certified by NHESP according to the *Guidelines for Certification of Vernal Pool Habitat*. As shown on the Wildlife Habitat Map**,** Ashburnham has 13 certified vernal pools. Certified vernal pools that are located within Areas Subject to Flooding (as defined by the MA Wetlands Protection Act) are protected under the Wetlands Protection Act for their wildlife habitat value. Neither state nor local law protects certified vernal pools outside of Areas Subject to Flooding. Consequently, these critical habitat areas are at risk of development.

Potential Vernal Pools: In addition to officially certified vernal pools, NHESP recently inventoried potential vernal pools based on aerial photographs. This type of analysis yields a certain level of error, however, since some vernal pools may be missed due to topography, photograph quality and forest cover. The Wildlife Habitat Map depicts 98 potential vernal pools. Since these potential vernal pools do not receive protection under the Massachusetts Wetlands Protection Act Regulations (310 CMR 10.00), Ashburnham should take the necessary steps to verify and certify them.

a) BioMap Project

In addition to the identification and mapping of the above-mentioned habitats, the NHESP prepared a statewide BioMap that identifies "Core Habitat" areas of rare species, and "Supporting Natural Landscape" areas that buffer Core Habitat and provide habitat for common species in Massachusetts. The Core Habitat layer depicts the most viable habitat for rare species and natural communities in Massachusetts. Ashburnham's Core Habitat areas surround various lakes and ponds, including Upper Naukeag Lake, Lake Wompanoag and Cheshire Pond, often extending outside of the town's boundaries. The largest area of Core Habitat is located along Route 119 in the northeastern corner of Town, and surrounds Wallace Pond and its tributary stream. A small area of Core Habitat is located near the confluence of Bluefield Brook and Bear Meadow Brook. The Supporting Natural Landscape layer buffers and connects Core Habitat polygons, and identifies large, naturally vegetated blocks that are relatively free from the impact of roads and other development. At least half of the Town of Ashburnham is classified as Supporting Natural Landscape.

b) Massachusetts Resource Identification Project

Another effort to identify and develop protection strategies for the most important natural resources in Massachusetts evolved from a partnership between the Environmental Protection Agency (EPA) Region I and MassGIS. The Massachusetts Resource Identification project used GIS technology and an ecosystem approach to natural resource management, emphasizing the development of a "decision support system tool" for areas of high priority to numerous conservation planning efforts as a means of preserving biodiversity and rare species. The tool and map products

assist state and regional planners and resource specialists with developing information for decision making at regional (state), landscape (watershed), and community scales. Map products include the following datalayers:

MRIP 100 Meter Riparian Corridor: Riparian Corridors are defined as 100 meter corridors encompassing perennial stream and river features as coded within the MassGIS 1:25,000 hydro datalayer. Wetlands were not included in the definition of riparian corridor.

MRIP Natural Lands Riparian Corridor: Natural Land Riparian Corridors are defined as "natural lands" within a 100 meter corridor encompassing perennial stream and river features that remain in a "natural state", potentially functioning as a corridor for select species movement, as well as additional ecological purposes.

MRIP Contiguous Natural Lands: Contiguous Natural Lands are large, contiguous tracts of natural land, defined using selected roads and a "natural land" definition tailored to meet the objectives of the Massachusetts Resource Identification Project (MRIP). Almost all of Ashburnham is classified as Contiguous Natural Lands.

Large tracts of Ashburnham's special habitats are already protected through ownership or afforded limited protection through inclusion in the Wetland and Watershed Protection District or the Water Supply Protection Overlay District. Significant areas with limited or no protection include the area west of Tuckerman Road, the area west of Lake Wampanoag and Cheshire Pond, and the area east of Route 101 and Route 12.

D. LAND USE

Analyzing the suitability of various land uses in various locations for various types of development provides a useful decision making tool for shaping a future that is sustainable. Land use suitability is based upon a careful analysis of the existing resources in the community and the prior evolution of the community. This section includes information about land use patterns, infrastructure, land use controls, the buildout analysis, existing or potential greenways or trail corridors, and existing protected open space. It also describes various land use issues in the Town of Ashburnham that should be addressed. Based upon this data, land use recommendations are made.

1. Land Use Patterns

The Town of Ashburnham is a rural residential community of 26,239 acres that grew around small water-powered mills. The agricultural activities supported its industrial villages and those in surrounding communities to the east and west. As the Town grew, its industrial base evolved to produce products that served the needs of Boston. Today, Ashburnham is primarily a bedroom community for those working in Fitchburg and Leominster.

The population of 5,546 live on a land area of 2,348 acres, according to the 1999 MacConnell Land Use survey available through MassGIS. MassGIS, the state agency responsible for producing and distributing geographic data, used aerial photographs taken in 1971, 1985 and 1999 to determine the pattern of land use change in Ashburnham during the past three decades. Land use refers to residential, commercial, industrial, and institutional development, as well as agriculture, forest and other open lands.

Undeveloped Land Uses

Forest is the largest single land use in Ashburnham, representing 75% of the Town or 19,719 acres. Forests are located throughout Town, but the largest swaths of permanently protected forests are located within the Ashburnham State Forest, Watatic Mountain State Wildlife Management Area, High Ridge Wildlife Management Area, Willard Brook State Forest, and the Lake Wampanoag Sanctuary. These forested areas provide a diversity of recreation opportunities for locals and visitors alike, including camping, picnicking, swimming, fishing, birdwatching, hiking, and hunting.

Once the dominant land use in Ashburnham, only a few farms still exist, representing 2.8% of total land use. Cropland, pasture and tree farms account for a total of 741 acres. The largest parcels of agricultural land are located in the eastern portion of Ashburnham, along Willard Road, Jewell Hill Road and Russell Hill Road. Since 1971, 22% of agricultural uses, or 214 acres, were converted to other land uses.

Recreation and open land uses comprise approximately 683 acres of land, which represents a 14.6% increase over 1971 figures. These lands, 2.6% of Ashburnham's total land area, constitute public parks, school grounds, playgrounds, cemeteries, utility corridors, and other abandoned lands. This category includes both public and private lands.

Wetlands account for 1,043.3 acres or 4% of Ashburnham's land use. Wetlands are concentrated along the banks of Bear Meadow Brook, Bluefield Brook, Cheshire Pond, Lincoln Pond, Lower Naukeag Pond, and Mud Pond. Since 1971, Ashburnham's wetland acreage decreased by 4.4%. Water found in Ashburnham's many rivers, brooks and scattered ponds constitutes 1,581 acres (6% of the total land area and the second largest land use category). During the past thirty years, total water acreage has increased by approximately 10 acres.

The "Other" land use category refers to land used for waste disposal (9.7 acres) and mining (38.7 acres) purposes.

Developed Land Uses

Residential land uses total accounted for 2,142 parcels or 2,348 acres (9% of the total land area), comprising the bulk of developed land in Ashburnham and the third largest land use category. Ashburnham has 5 parcels or 1.9 acres of multi-family residential land use, 907 acres of residential use with lot sizes between one quarter and one

half acre, and 1,439 acres of residential land with lot sizes greater than one half acre. Since 1971, more than 985 acres of land was converted from various open space uses to residential uses. Ashburnham's residential growth trends echo that which occurred throughout the Montachusett region. In response to the needs of the "Baby Boom" generation and regional increases in population over the past 25 years, changes in land use patterns reflect a growth spurt in the creation of housing, coupled with losses in forest, cropland, and pastureland acreage. Housing stock in Ashburnham, as throughout the Montachusett region, primarily consists of single-family housing built on larger lots. The amount of land devoted to homes on lots larger than ½ an acre increased by 956 acres or 198% since 1971.

Industrial land uses occupy 25 parcels or 47.8 acres (0.2% of Ashburnham's total land area). Ashburnham's industries are situated along Route 101 and include Flo Chemical Corporation, Freeman Industries, F.W. Lombard Company, Leeds Conveyor Manufacturing Company, and Woodland Energy Company. Since 1971, the amount of land devoted to industrial uses increased by a mere 3.7%, or 1.7 acres.

Located primarily along Routes 101 and 12, commercial land uses occupy 43 parcels or 28 acres (0.1% of the total land area). Commercial activity in Ashburnham is small-scale, consisting of stores and service establishments that cater to the local population, primarily. Since 1971, the Town experienced a 55.6% increase in the amount of land devoted to commercial uses.

Ashburnham Land Use Changes 1971 to 1999

	1971		1985		1999		Change 1971-1999	
	Acres	%	Acres	%	Acres	%	Acres	%
Decreases								
Forest	20,621.2	78.6%	20,074.4	76.5%	19,718.8	75.1%	(902)	-4%
Agriculture	955.1	3.6%	874.6	3.3%	740.9	2.8%	(214)	-22%
Wetland	1,053.2	4.0%	1,053.2	4.0%	1,043.3	4.0%	(10)	-1%
Increases								
Industrial	46.1	0.2	46.1	0.2	47.8	0.2	2	4%
Commercial	18.2	0.1	22.0	0.1	28.3	0.1	10	55%
Water	1,570.8	6	1,563.8	6	1,580.9	6	10	1%
Residential (1/4 to 1/2 acre lots)	880.5	3.4	884.1	3.4	907.4	3.4	27	3%
Other	16.4	0.1	36.9	0.1	48.4	0.1	32	195%
Recreation & Open Land	595.6	2.3	625.8	2.3	682.7	2.3	87	15%
Residential (> 1/2 acre lots)	482.5	1.8	1,057.8	1.8	1,438.9	1.8	956	198%
TOTAL	**26,239.4**	**100**	**26,239.4**	**100**	**26,239.4**	**100**	**-**	**0%**

a) Building Permits

Since 1990, the Town approved 3 subdivisions yielding 35 new housing units. However, since the bulk of Ashburnham's new residential development occurred along existing roadways, not within subdivisions, this figure does not give an accurate picture of residential development in Ashburnham. According to Ashburnham's Building Department, the town issued 486 building permits for the construction of new single-family homes between 1986 and 2000. On average, Ashburnham issues 32 building permits per year. The table below contains summary information on recent and pending residential developments in Ashburnham.

Subdivisions Approved Since 1990

ID	Name	Total Units	Date Appr
1	Cheshire Pond	9	2000
2	Village Estates	18	1999
3	Whitney Park	8	1998
	Total Units	**35**	

Source: EOEA Buildout Analysis, Ashburnham Planning Board

2. Infrastructure

a) Current Public Water Supplies and Areas of Contribution

Often communities must look beyond their borders to find the necessary water resources to serve the needs of the residents and businesses. They may lack surface or groundwater resources within their own borders, or the resources may be insufficient to meet the need. As communities grow, they must consider the ability to provide the needed resources and infrastructure, and they must consider whether resources in communities outside their borders are adequate to meet the need. Tapping resources in other communities will also mean that communities must negotiate for resources both to meet the current need and to accommodate future growth. In areas where the water resources already exhibit basin stress, diminishing resources may necessitate growth control measures or growth limitations, and may force communities to reexamine their futures. For this reason a discussion of water supplies in surrounding communities is included with the discussion of the Town's resources.

Ashburnham and Winchendon– Both the Winchendon and Ashburnham Water Departments withdraw from Upper Naukeag Lake, a 240-acre spring fed surface water reservoir in North Ashburnham. The reservoir has a safe yield of 1.7 million gallons per day, on average. In 2003, the reservoir provided 236,000 gallons of water per day to 1,250 residential, commercial, industrial, and institutional customers in Ashburnham, which is approximately 14% of the system's capacity. Ashburnham's water distribution system serves customers in the Town Center and along major thoroughfares, including Route 12, Route 101, Route 119, South Main Street, Williams/Corey Hill Road, Lake Road, and Lakeshore Drive. Winchendon draws approximately 700,000 gallons per day, which is approximately 41% of the system's capacity.

The Winchendon pump station was built in 1950 at the northwest corner of the lake. Water is pumped to two holding tanks, one at Murdock Hill (capacity 1.56 million gallons), and the other at Old Centre on High Street (capacity 1 million gallons). The gravity-fed distribution system serves 2,000 customers, including homes and businesses, in the town center. In Anticipated demand in the next decade is expected to exceed the safe yield for the Lake and Winchendon will need to develop alternative sources for public water. The Winchendon Department of Public Works estimated that the system served roughly 58 percent of the 9,600 residents, in 1998. The remaining 42 percent rely upon private wells for their drinking water.[9]October 2001, the two water departments installed water flow recorders for accurate reporting of withdrawal volumes. Within the next decade, anticipated demand is expected to exceed the safe yield for Upper Naukeag Lake.

Completed in 2001, the Ashburnham and Winchendon Joint Water Filtration Plant utilizes the proprietrary Trident process for water treatment. The *2003 Annual Drinking Water Report* stated that Ashburnham's tap water met all U.S. Environmental Protection Agency (EPA) and state drinking water standards. Despite this, the *Massachusetts Department of Environmental Protection Source Water Assessment and Protection Report* noted that Ashburnham's water supply is at high risk of contamination due to the presence of harmful land uses within the protection areas. Uses within 400 feet of the reservoir and 200 feet of its tributaries that are of particular concern include residences relying upon on-site septic systems, above ground and underground storage tanks, roads, recreational activities, and wildlife. This area, known as the Zone A, is the most critical for water protection efforts.

[9] Interview with Michael Murphy, August 24, 1998, Town of Winchendon Open Space and Recreation Plan, LandUse, Incorporated. October, 1998.

In 1993, the Montachusett Regional Planning Commission published a Watershed Resource Protection Plan for the water supply that included a risk assessment, recommendations for sanitary surveys of lakefront properties and acquisition of large lakefront parcels, and a management and operations plan. The Town also adopted the Water Supply Protection District, which encompasses all lands within the Town of Ashburnham that lie within the watershed of the Upper Naukeag Lake Reservoir.

Fitchburg - The City of Fitchburg owns and maintains 10 reservoirs, with a combined storage capacity of more than 5.3 billion gallons, that are located in Fitchburg, Ashby, Westminster, Princeton, and Hubbardston. The system has two main branches, one from the north and one from the south. The southern branch consists of four linked reservoirs: Bickford Reservoir in Hubbardston, Mares Meadow, Wachusett, and Meetinghouse Pond. The northern branch consists of six reservoirs: Scott, Ashby, Shattuck, Overlook, Lovell, and Falulah. All but one of these reserves are within the Nashua Watershed. The hilly terrain surrounding the city supports a gravity fed distribution from the reservoirs to the Regional Water Filtration Facility, where it is filtered and treated. The siting of the filtration facility at Hager Park in Westminster, allowed the water department to use the existing transmission mains and to maintain the existing gravity flow system, resulting in significant cost savings.

The Fitchburg public water supply at Meetinghouse Pond serves the Westminster public water system, providing water to 60% of the population. Fitchburg owns 1,557 acres of land surrounding Meetinghouse Pond, and Winchendon owns 15.8 acres, for the protection of public water supplies. The Fitchburg Water Department has a registered volume of 6.19 mgd and an average annual demand for water of 7.37 mgd. Westminster has a registered volume of 0.24 mgd and is permitted to 0.28 mgd to February of 2009.

Westminster – Westminster has a total of 1,431 acres of water contained in 17 open water bodies. The City of Fitchburg owns 1,557 acres of land surrounding Meetinghouse Pond, and the Town of Winchendon owns 15.8 acres, for the protection of public water supplies. The town is in the process of hooking up to the Fitchburg water system and anticipates the ability to meet demand for the next twenty years. The Fitchburg public water supply at Meetinghouse Pond serves the Westminster public water system, providing water to 60% of the population. The remaining 40% obtain their water from private wells and springs. Meetinghouse Pond has a safe yield of 1.36 million gallons per day. Westminster is permitted to withdraw 100 million gallons of water per year without payment to Fitchburg. The two communities are constructing a new water filtration system, pumping station and connections to the existing supply system. Westminster owns a smaller water supply at the 14-acre Wyman pond. The site has a single well with a safe yield pumping capacity of 1 million gallons per day.

Gardner – The primary water source in Gardner is Crystal Lake, a natural spring fed lake that once served as a recreational resort. The lake has a useful volume of 350 million gallons. Perley Brook Reservoir, built in 1958, supplements the Crystal Lake water supply. It has a useful volume of 206 million gallons[10]. A network of water mains supplies the developed areas and all industrially zoned parcels. The Gardner Water department holds 1,817 acres of town land, as well as 81 acres of land in Ashburnham and 102 acres in Winchendon, for the protection of the watershed. The town is making improvements to the Crystal Lake filtration plant and is developing a new well with a potential pump rate of more than 70 gpm in the Otter River/Snake Pond Area at Snake Pond, which should be operational by the summer of 2000. In addition, the City recently acquired three priority parcels along the Otter River for wellhead protection. The City plans to identify and acquire additional parcels in its Watershed Protection Districts.

Gardner shares surface and groundwater resources with its neighbors Ashburnham, Winchendon, Templeton and Hubbardston. Cross-boundary cooperation may be required to protect watersheds and aquifer recharge areas. The Greater Gardner Sustainable Growth Management Plan recommended that Gardner should enter into a multi-town agreement to examine the critical issue of water supply protection. Collaboration with Templeton is especially important, both to safeguard Gardner's new well near Snake Pond and to manage responsibly the Gardner-related land uses in Templeton such as the airport and wastewater treatment plant. Gardner's leaders have discussed the need to adopt a local wetland bylaw to supplement state wetland protection provisions.

b) Wastewater Management

[10] Gardner Open Space and Recreation Plan, 1994, The Berkshire Design Group.

Ashburnham – Ashburnham's public sewer system serves a total of 569 residential, commercial, industrial and institutional properties in the center of town and South Ashburnham. Roughly 23% of households rely on public sewer service, while the remaining 77% of residents rely on individual on-site septic systems. From June 2003 to May 2004, Ashburnham's six-year old sewage collection system pumped an average of 99,265 gallons per day to the Gardner treatment facility. This is approximately 50% of the flows permitted via agreement with the City of Gardner. Eventually, the Town hopes to extend sewer service to densely developed lakefront properties, however no sewer extensions are planned in the foreseeable future.

Unfavorable soil conditions prompted the Town to adopt large lot size zoning to protect drinking water. The moist, loamy upland soils are poor in topsoil, susceptible to erosion and unconsolidated and percolate slowly rendering them severely limited for septic systems. The numerous lakes in the town are popular both seasonally and year-round. A number of old dwellings still use outdated methods of sewage disposal and several camps still use out-houses. These systems do not treat the sewage generated at the sites. The poor soil conditions and high water table also make installation of proper replacement systems difficult.[11]

Gardner/Ashburnham - The Gardner Water Pollution Control Facility is located at Lower Parker Street in the Town of Templeton, west of the Otter River. The wastewater collection and treatment system serves over 90 percent of the city's residents as well as the collection system in Ashburnham. The treatment system consists of primary sedimentation, trickling filtration, secondary sedimentation and post-chlorination. Sludge is dried and disposed of in sanitary landfills. Phosphorus is removed and the effluent is de-chlorinated prior to discharge. Present capacity of the system is 4.3 million gallons per day.[12] The Five-Year Action Plan in Gardner's 2000 Open Space and Recreation Plan includes plans for extending the sewer service to the municipal golf course and to residents in the immediate vicinity. However, Gardner's sewer system is plagued by inflow and infiltration problems that have prompted placement of a moratorium on all sewer extensions.

Winchendon – The wastewater treatment facility (MA0100862), at 637 River Street, serves 33% of Winchendon's population, the remaining population relies on private individual septic systems. Built in 1974, the wastewater system was designed to treat 0.5 million gallons of wastewater per day. Treated effluent discharges directly to the Millers River. The plant has not been upgraded since it went on line, and has exceeded its design life. The eighty-year old collection system needs work, as well. Stormwater can flood the sewer system causing raw sewage to be discharged to the Millers River.

Westminster – Sewer service in Westminster is provided through an agreement with the City of Fitchburg. The service has 516 sewer connections, mostly in the center of town, serving roughly 25% of the population. Everyone else is on individual septic systems. Sewage is treated at East Plant, located in the City of Fitchburg, which discharges treated water in the Nashua River Watershed. Very little of the sewage disposal affects the Millers River Watershed. The system processes 111, 836 gallons of wastewater per day, but has the capacity to process up to 250,000 gallons per day. Two large pumps were installed in 1999 that can pump up to 500 gallons per minute. Plans for expansion include a 5-mile sewer expansion to serve Ellis Road, Scenic Drive and Gatehouse Road. Voters recently approved additional sewer lines to serve West Main Street, as well. Less than 34 percent of the water withdrawn from the public water supply is returned through the sewer system.

The portion of Westminster that is within the Millers River Watershed is discussed in the Westminster 2000 Master Plan as an area currently under development pressure. Most new residential construction is taking place on ANR lots, and the Plan recommends the use of cluster and planned unit development to preserve the rural character. The Zoning Bylaw provides for application to the Board of Appeals for a special permit excepting subdivision plans from the lot area and frontage restrictions. These development methods generally increase the density of residential units in one area in exchange for open space set-asides in another. The increased density can be accommodated with the use of decentralized wastewater treatment systems that can efficiently and cost-effectively treat between 1,000 and 50,000 gallons per day. Essentially, ordinary septic tanks are connected to a multiple user collection system and a leaching system. Over 15,000 gallons per day, the system is required to have a nitrogen reduction system.

[11] Ashburnham Open Space and Recreation Plan, 2001.
[12] Water Supply and Wastewater, the Regional Plan, Montachusett Regional Planning Commission, Curran Associates, Inc.

3. Environmental Challenges

a) Quality of Surface Water Resources

As is common in many communities, non-point source pollution, or contaminated run-off, has contributed to the degradation of the Whitman River and other Ashburnham surface and ground water resources. Potential contaminants include underground storage tanks, failing septic systems, salt/sand applications to roadways, fertilizer run-off from lawns, some agricultural activities, heavy equipment dumps, landfills, and gas stations. These land uses may discharge sediments, pesticides, fertilizers, chlorides, effluent, and hazardous wastes into water bodies, which in turn harms water quality.

Under the regulations of the Federal Clean Water Act, states are required to file a report every two years that identifies those surface waters that are not expected to meet the Act's surface water quality standards (Class A, Class B, etc.). This report, known as the *Massachusetts Section 303(d) List of Waters*, was last prepared in 1999 and includes an assessment of water quality data collected in 1998. Three surface waters in Ashburnham, according to the 1998 303(d) report, did not meet the water quality standards of the Federal Clean Water Act.

Surface Water Resources with Water Quality Problems

Surface Water Resource	Sub-Watershed	Pollutants/Stressors
Ward Pond	Merrimack	Organic Enrichment/ Low Dissolved Oxygen
Lower Naukeag Lake	Millers	Noxious Aquatic Plants
Wallace Pond	Millers	Noxious Aquatic Plants

Plagued by shallow water, non-point source pollution is also exacerbating the eutrophication of Lake Watatic and Little Watatic Pond. Although part of the natural aging process, pond eutrophication can be hastened by excessive inputs of non-point source pollutants, which promote the growth of algae and aquatic vegetation. Decaying algae and rampant vegetation steal oxygen from other life forms, especially fish. Because algae blooms often make the water unsightly, foul smelling and void of wildlife, the recreation potential of victim lakes and ponds is limited. Given this reality and the fact that dredging and weed control measures will never be effective as long as pollutants continue to reach surface waters, the community may want to draft a Watershed Management Plan as part of a long-term solution. The aim of this Plan should be to pinpoint the definitive causes of accelerated pond eutrophication in Ashburnham, and recommend strategies for minimizing pollution inputs. Other activities that the town may wish to consider undertaking are cleaning roadways more frequently, maintaining catch basins, limiting salt/sand applications to roadways, and launching a campaign that broadens public awareness of ways residents can help abate non-point source pollution within the watershed. Environmental agencies, including the United States Natural Resources Conservation Service and the Massachusetts Department of Environmental Protection, have publications that offer detailed information on storm water control measures.

b) Public Drinking Water Supplies

Ashburnham's public water supplies face a variety of challenges. As previously mentioned, land uses within Zone A jeopardize water quality and demand will likely outstrip supply within the next 50 years. The pipeline extending to Page Beach poses an additional challenge. Installed approximately 50 years ago to serve camps and seasonal cottages on Sunset Lake, the small pipe was placed a mere 6 inches beneath the surface. Over time, the cottages were transformed into year-round dwellings, and the pipe proved inadequate to meet increasing demands for water. The Town fields frequent complaints about water pressure, and winter temperatures cause the pipe to freeze and break. Three previous applications for grant funds to replace this pipe have been rejected, however, the Town is hopeful that they will receive the necessary $800,000 as part of its 2004 Community Development Block Grant application.

Another challenge involves the desire to extend the municipal water service to properties along Fitchburg Road whose wells are contaminated with methyl tertiary butyl ether (MTBE). MTBE is a chemical blend-

ed into gasoline by oil refiners to meet air quality standards. Because it is highly soluble and does not biodegrade in underground water, it is very difficult and expensive to clean up. The United States Environmental Protection Agency (US EPA) has concluded that MTBE is an "animal carcinogen, and poses a carcinogenic potential to humans". Given the potential health risks, Ashburnham should prioritize extension of the line and seek funding for this endeavor through the US EPA. To prevent MTBE contamination at other sites, facilities that store or handle MTBE or MTBE blend gasoline should be designed to contain and/or control spills from process areas, loading, and unloading operations, including customer overfills, drive-offs and spills from any delivery or dispensing activity. Groundwater monitoring wells should be installed down gradient of any underground storage tank and routinely sampled.

c) Sewage

Many parts of Ashburnham are not well suited to septic systems because there is groundwater near the surface or the soils have poor filtering capacity. Failing septic systems are a problem for waterways and water bodies, and the *Ashburnham Open Space and Recreation Plan 2001* notes that they are an ongoing challenge, especially for unsewered areas surrounding Ashburnham's many lakes. A number of old seasonal cottages that have been converted into year-round dwellings use outdated methods of sewage disposal and several camps still use outhouses. These systems do not treat the sewage generated at the sites, and the effluent eventually seeps into the water bodies, harming water quality. Moreover, septic tanks must be pumped out every two years in order to function properly. Despite the fact that replacing a failed septic system is very expensive, increasing disposal costs often discourage people from properly maintaining their septic systems.

Ashburnham has taken some steps to alleviate the problems associated with failing septic systems. In order to protect drinking water, Ashburnham adopted large lot size zoning. This ensures a safe distance between wells and septic systems. Ashburnham also received $400,000 in grant funding during the past few years to assist eligible homeowners with the replacement of failing septic systems. The success of the Local Septic System Management Program prompted Ashburnham to seek an additional $200,000 in grant funds in 2004. Ashburnham is awaiting notification on the status of that grant application.

Because a high water table and poor soil conditions make installation of proper replacement systems difficult, the Town may want to pursue alternatives to septic systems as part of a long-term solution. One option involves the extension of the municipal waste water system to particularly sensitive lakefront properties. Also, developers of isolated subdivisions should be encouraged to install central sewer treatment facilities. These systems come in various sizes such that they can serve as few as 10 houses or as many as 300 houses. One primary benefit of central sewer treatment facilities is that they are eco-friendly alternatives to incurring the large costs associated with extending sewer lines to remote areas of Town.

d) Hazardous Wastes/ Brownfields

The Massachusetts Department of Environmental Protection (DEP) is responsible for investigating and enforcing cleanup of sites contaminated with toxic or hazardous wastes. As of June 2004, 31 sites were in some stage of environmental notification, assessment and remediation in the Town of Ashburnham. While the majority of these sites are residences and small businesses, including gas stations, with minor cleanup requirements, others have more serious cleanup requirements. These sites are referred to as brownfields. According to the mainstream definition, "brownfields are abandoned, idled or underused industrial and commercial properties where expansion or redevelopment is complicated by real or perceived contamination." Brownfields may pose serious environmental threats, but many communities are unable to afford the tremendous costs associated with remediation. Moreover, because developers do not know what potential cleanup costs may be, they often shy away from these properties. The result is that abandoned properties continue to sit idle, contribute little to the tax base, threaten the health, safety and welfare of the community, and visually degrade the surrounding neighborhood.

A case in point is the former Caouette Catering facility at 150 Center Street. The facility was once used as a restaurant. In 1999, a phase I assessment was conducted on the site under the Montachusett Region Brownfield Reuse Initiative, a pilot project sponsored by the United States Environmental Protection Agency. Launched in response to an alarmingly high number of environmentally contaminated sites in the region and the lack of commercial and in-

dustrial land, the program targets sites that have the highest likelihood of being returned to productive use. It was determined that the property contained a 2,000 gallon underground storage tank and empty 55 gallon drums. The Town used Community Development Block Grant funds to remediate the site and demolish the structure, an attached garage/barn and pavilion.

While the former Caouette Catering facility is a success story, Ashburnham has other brownfield sites, including the Spectro-Coating site, in need of remediation and return to active use. To accomplish this task, the Town should seek funds from agencies such as the United States Environmental Protection Agency, Massachusetts Department of Environmental Protection, Massachusetts Department of Housing and Community Development, and MassDevelopment. Moreover, to minimize the incorrect disposal of hazardous materials by residents, the Town should conduct household hazardous waste collection days and launch a campaign to educate homeowners about proper methods of disposal.

4. Land Use Controls and Growth Management Strategies

Zoning Scheme

If one compares the zoning scheme with Ashburnham's land use pattern, it is clear that the zoning scheme is largely responsible for the pattern of development in Ashburnham. The zoning requirements and other relevant land use laws are described below. The buildout analysis that follows examines the implications of development in accordance with these requirements.

The Zoning By-laws of Ashburnham provide for two residential zones, a Residential-A (R-A) District and a Residential-B (R-B) District. Approximately 14% of the Town of Ashburnham is included within the R-A District, which is located in the area surrounding Ashburnham Center and south to include the villages of South Ashburnham and a portion of Blackburn Village. All lots created in the R-A District must have 150 feet of frontage on a right-of-way and a minimum lot size of 45,000 square feet. The R-B District, containing the majority of Ashburnham's total acreage, requires 200 feet of frontage on a right-of-way and a minimum lot size of 60,000 square feet. Multi-family dwellings are not permitted in either district, however assisted elderly housing establishments are permitted upon receipt of a special permit from the Zoning Board of Appeals on 12,000 square feet of land area or 1,000 square feet of land area per each sleeping room, whichever is greater. Other uses permissible in either district by special permit are adult entertainment establishments, offices, restaurants, commercial greenhouses, motel/hotels, and light industrial uses including research and development. Any new roads created to serve subdivisions require a 50-foot right-of-way for collector streets and 40-foot right-of-way for minor roads and streets.

Ashburnham's Zoning By-laws provide for two commercial districts: the Village Center (V-C) District, which is located at the confluence of Route 12 and Route 101, and the Business (B) District, which occurs in two locations at the intersection of Route 101 and Main Street South, and at the intersection of Route 119 and Route 101. According to the Zoning By-law, the V-C District is "intended to foster the appropriate reuse of existing structures and new construction within the downtown area in harmony with the historic character and dense development pattern of the downtown". A variety of business uses are permitted including professional offices, retail shops, services uses, banks, restaurants, funeral homes, and motels/hotels. Other uses, including single-family homes, assisted elderly housing establishments, adult entertainment establishments, motor vehicle sales or repair, commercial greenhouses, commercial indoor amusement or recreation facilities, and light industrial uses including research and development within a building are permitted upon receipt of a special permit from the Zoning Board of Appeals.

The B District allows a similar variety of uses, however two family homes are permissible upon receipt of a special permit from the Zoning Board of Appeals. Although the V-C District and B Districts have minimum lot size, setback and maximum lot coverage requirements, the V-C District has additional front yard provisions that help ensure the creation of a pedestrian-friendly area. For example, no building may be set back more than thirty feet from the street, at least 80% of the front yard must be landscaped open space and the Zoning Board may grant a special permit to reduce the required front yard setback. Moreover, the Bylaw states that the front, side and rear yards within any District shall not be used for the parking or storage of automobiles, trucks, recreational vehicles, trailers, or boats.

Dimensional Requirements

	R-A District	R-B District	B District	V-C District	I District
Minimum Lot Area	45,000 square feet	*60,000 square feet	25,000 square feet	25,000 square feet	60,000 square feet
Minimum Frontage	150 feet	200 feet	125 feet	125 feet	150 feet
Minimum Front Yard	20 feet	40 feet	20 feet	20 feet	40 feet
Minimum Side Yard	10 feet	25 feet	10 feet	10 feet	25 feet
Minimum Rear Yard	10 feet	25 feet	10 feet	10 feet	25 feet
Maximum Height	35 feet	35 feet	40 feet	40 feet	40 feet
Maximum Lot Coverage	25%	20%	40%	50%	30%

* WSP *90,000 square feet

Source: Town of Ashburnham Zoning By-laws

The Town's Industrial (I) District enables the development of industrial parks, and manufacturing, assembly, processing, fabrication, packaging, wholesale, warehouse, distribution, and research and development facilities. The District also allows single and two family homes and most business uses upon receipt of a special permit from the Zoning Board of Appeals. As depicted in the Dimensional Requirements, the required minimum lot size is 60,000 square feet and the minimum frontage is 150 feet.

The Wetland and Watershed Protection (W) District was created to preserve Ashburnham's water resources. The new construction of residential, business, wholesale and industrial, and scientific research and development uses are prohibited. The Bylaw also prohibits uses particularly detrimental to water quality, including, with some exceptions, landfills, auto graveyards, junk and salvage yards, outdoor storage of salt, de-icing materials, pesticides or herbicides, stockpiling and disposal of snow or ice that contain sodium chloride, calcium chloride, chemically treated abrasives, etc., dumping or disposal of toxic chemicals, wastewater treatment works, storage of liquid petroleum products, uses that generate, use, treat, process, store or dispose of hazardous wastes, and individual sewage disposal systems designed to receive sewage over a certain threshold. The Bylaw denotes special standards, such that a special permit is required for the rendering impervious of more than 15% or 2,500 square feet of any lot.

Ashburnham's two overlay districts are the Flood Plain District and the Water Supply Protection Overlay District. The Flood Plain (F) District is intended to ensure that floodplains continue to provide flood storage and recharge benefits so as to protect persons and property in Ashburnham and downstream communities against flood hazards. Within the floodway, development is allowed upon demonstration that the building will not result in a decrease in flood storage capacity or increase in flood levels during the occurrence of a 100-year flood. Septic tanks, cesspools and leaching fields are *not* permitted within the floodplain. The Bylaw also specifies subdivision standards and regulates the placement of mobile homes within the floodway and Zone A1-19. The Water Supply Protection (WSP) District includes all lands within the Upper Naukeag Lake Reservoir, which serves as the public water supply for both Ashburnham and Winchendon. The Bylaw prohibits many of the same uses that are prohibited in the Wetland and Watershed Protection District. One notable exception is that single-family homes are permitted on lots of at least 90,000 square feet. Two-family homes, adult entertainment establishments, and scientific research and development establishments are permitted upon receipt of a special permit from the Zoning Board of Appeals. Like the W District, special standards are denoted, such that a special permit is required for the rendering impervious of more than 15% or 2,500 square feet of any lot.

Other Land Use Controls & Growth Management Strategies

Protection of natural, historic and scenic resources within Ashburnham can be achieved through the implementation of a variety of other land use controls and growth management strategies. These controls can conserve land and important resources by targeting development to areas best suited to it, while steering development away from critical resources such as wetlands or wildlife habitat. Growth management strategies can also slow the pace of development so that it keeps pace with a community's capacity to provide services. Land use controls and growth management strategies that Ashburnham has adopted to date include: Off-Street Parking Requirements, Wireless Com-

munications Facilities and Towers Bylaw, Soil, Vegetation, Rock, and Gravel Removal Bylaw, Site Plan Review and Approval Bylaw, Development Rate Limitation Bylaw, and Subdivision Rules and Regulations Requirements.

Off-Street Parking Requirements – Special regulations were devised to facilitate commercial development in the Village Center District by enabling the use of public off-street parking facilities in lieu of private off-street parking facilities. The Zoning Board of Appeals may grant a special permit waiving off-street parking requirements for commercial uses when it is found that a sufficient supply of publicly-owned parking spaces exist within the vicinity and the applicant pays the Town a fee equal to the fair market value of the waived parking spaces plus the cost of their construction.

Wireless Communications Facilities and Towers By-Law – This By-law regulates the placement, design, construction, removal, and modification of wireless communications facilities within Ashburnham. It helps ensure the safe and appropriate siting of these facilities so as to minimize impacts to the Town's historic, cultural, natural, and aesthetic resources. Applicants interested in installing a wireless communication facility must obtain a special permit from the Zoning Board of Appeals.

Soil, Vegetation, Rock, and Gravel Removal Bylaw – This Bylaw aims to prevent the degradation of the town's natural resources due to the improper or uncontrolled removal or redisposition of soils, vegetation and earth materials. The Zoning Board of Appeals may issue Soil, Vegetation, Rock and Gravel Removal Permits for land in R-B, I and W Districts that does not exceed 20 acres in size. Only 5 acres may be worked at any time. Soil can not be removed within 300 feet of a street or way, 100 feet of the high water mark of any natural water course, or 100 feet of a lot line unless part of site restoration work that has received prior approval. Permits are reviewed periodically, and on an annual basis at least. Removal activities are subject to a number of standards governing hours of operation, site preparation, site maintenance, screening and access, temporary buildings, mechanical crushing and screening, restoration, and security.

Site Plan Review and Approval – Aimed at facilitating traffic channelization and control, assuring adequate drainage, protecting the environment, property values, abutting properties and visual amenities, this provision is invoked for the construction, exterior alteration, relocation, occupancy or change of use of any building, structure or premises, with the exception of single family homes and agricultural uses. The Planning Board is the site plan approval authority. The Planning Board may grant a waiver from the bulk of the site plan requirements if they determine that the project will not create additional parking or traffic problems and/or site hazard. Site Plans must show provision for adequate drainage of surface water from paved areas, existing, proposed and retained vegetation, existing and retained natural features, pedestrian facilities, parking spaces and circulation area, existing and proposed fencing, monuments, existing and proposed elevations and contours, and existing and proposed utilities. The Bylaw specifies landscaping requirements by lot area.

Developmental Rate Limitation – This Bylaw was adopted to promote orderly growth consistent with historic average development rates. Beginning on May 20, 1987, building permits for the construction of more than eight new dwelling units on lots created from land contiguous and in the same ownership may be issued only if the town-wide number of dwelling units authorized within the 24-month period previous to and including the date of approval will total fewer than 50 dwelling units. Construction of eight dwelling units or fewer on land contiguous and in the same ownership may be issued without regard to the town-wide development rate. The Zoning Board of Appeals may grant special permits for projects that have unusually low impact on public services and serve an important unmet housing need of Ashburnham residents.

Environmental Impact Statement for Subdivisions – Subdivision applicants must submit an Environmental Impact Statement with their Definitive Plan. The Statement must describe the potential impacts of the proposed development on the physical conditions of the site, surface water and soils, subsurface conditions, traffic, police and fire protection services, public works services, water supply and distribution services, and school enrollment. The Statement must also identify the project's effect on the human environment, describing the proposed buildings, building materials, location of common areas and service facilities, lighting, screening, security provisions, proximity to transportation, shopping and educational facilities, and description of the proposed recreational facilities.

Center Village District Site Plan Review Principles – The Planning Board adopted design review principals and standards that inform site planning and building design within the Center Village District. Off-street parking areas

are not permitted within the front setback and must be screened from adjacent properties with dense plantings or low fencing. Stylistic features of buildings, structures or landscapes should be preserved, contemporary designs should be compatible with the character of the surrounding environment, additions and alterations should enhance the surrounding environment, development should be consistent with existing setbacks, buildings on a single site should relate harmoniously to each other, and the location and number of curb cuts should minimize turning movements and hazardous exits and entrances. Design review standards govern height of alterations, proportions of architectural elements, relation of structures and spaces, shape of design elements, landscape, scale, directional expression, architectural and site details, and signs.

5. Existing and Potential Greenways or Trail Corridors

Throughout the Montachusett Region, communities are developing greenway corridors and viable transportation corridors for bicycles and pedestrians. Greenways are contiguous undeveloped parcels of land that serve as a natural corridor, trail system or bikeway. They serve as protected habitat for biodiversity and as corridors for wildlife migration, and they offer an enhanced quality of life to the communities they pass through. In addition to the open space benefit, greenways have proven to raise property values of nearby homes. The National Park Service's report, Economic Impacts of Protecting Rivers, Trails, and Greenway Corridors cites, "numerous studies on the measurable increase in real property value generated by proximity to traditional parks and to the newer greenways."

Abandoned railroad rights-of-way can serve as key unifying features for creating greenways and bicycle trails. The Commonwealth of Massachusetts Transportation Enhancement Program allocates monies for bikeway and pedestrian greenway projects in the Montachusett Region. The Enhancement Program is a reimbursement program that encourages diverse modes of travel and covers bicycle, pedestrian, historic preservation, scenic beautification, railway conversions and other sustainable transportation enhancements. Interested communities can submit applications directly to MRPC for consideration. In Ashburnham, the existing and proposed greenways and trails include:

a) Midstate Trail

The scenic Midstate Trail is a 92-mile hiking trail extending from Rhode Island through Worcester County and eventually connecting to the Wapack Trail in Ashburnham. It passes through Westminster along the southern border with Princeton, connecting the Wachusett Mountain State Reservation, Redemption Rock (site of the redemption of Mary Rowlandson, during King Philips War), and Crow Hill Ledges (a popular rock-climbing site in the Leominster State Forest), before turning north through the Muddy Pond Conservation Area, Westminster State Forest and private landholdings (lacking trail easements), to connect with Mount Watatic, in Ashburnham, and the Wapack Trail.13

In the late 1970s the Worcester County Commissioners proposed to create a trail across the entire county by linking several short trails and a former trail linking from Wachusett Mountain and Mount Watatic. A group of dedicated people formed the Midstate Trail Committee to plan the actual route and to work on its construction. The Midstate Trail Committee, with the help of the Worcester chapter of the Appalachian Mountain Club, and a large group of resident volunteers, maintains and administers the trail. The Department of Environmental Management has provided support, map printing, and publicity over the years.

The Midstate Trail is threatened by encroachment of continuing development which forces the Trail onto paved roadways. This development also destroys and fragments existing habitat and threatens the long-term conservation of native species and natural communities. Public lands are becoming increasingly valuable for plant and wildlife habitat, recreation, education, research and spiritual renewal. Trail supporters actively work together to encourage landowners to realize the value the trail brings to the area and to support efforts to keep it off the roadways.

Noted features along the trail corridor include 1 certified vernal pool and 3 potential vernal pools within a 100-meter buffer of the trail. The corridor passes through an NHESP Priority Site of Rare Species Habitat & Exemplary Natural Communities. An added value of the Midstate Trail is its function as a corridor for species migration.

13 http://www.midstatetrail.org

b) Wapack Trail

The 21-mile Wapack Trail extends from Mount Watatic in Ashburnham, MA, to North Pack in Greenfield, NH, offering opportunities for hiking, snowshoeing, and cross-country skiing. Founded by Frank Robbins and Marion Buck (Davis) of Rindge, NH, in 1923, the Wapack Trail, follows a ridgeline along the summits of Watatic, Pratt, New Ipswich, Barrett and Temple mountains, then ascends the Pack Monadnocks. Yellow triangles on trees and rocks blaze the Wapack. Cairns mark the trail along bare stony sections and summits. The trail has open ledges and rocky peaks that provide spectacular views of Mount Monadnock, the Berkshires, the Green Mountains, Boston, and the White Mountains. The trail has natural assets such as spruce forests, wildflowers, blueberries, beaver, moose, fox, rabbit, partridge, migratory birds and sometimes wild turkey.

The Friends of the Wapack (FOW) an independent, non-profit organization composed of hikers, volunteers, supporters and landowners, maintain the trail and work to preserve public access permanently through coordination with conservation groups.

c) Route 12 Corridor Bikeway

The Route 12 Corridor Bikeway follows Route 12 from the Sterling/West Boylston line to the New Hampshire State Line. MRPC proposed using the highway northwest of Fitchburg as a bike route in 1979 due to its popularity with bicycle clubs. This proposed bikeway would connect Winchendon, Ashburnham, and Sterling to the regional centers of Fitchburg and Leominster. It will also help connect the Fitchburg/Leominster area to the Worcester area to the south.

d) Route 119 Bikeway

This proposed bikeway follows Route 119 from Groton/Littleton Town Line to the New Hampshire State Line. This route would connect Ashburnham, Ashby, Townsend, & Groton. Also two spurs off this route would be beneficial from a recreational viewpoint. The town of Groton's proposal called for a bike path from Route 119 to Knopps Pond. This bike path was approved several years ago by the DPW; however, local funding has not been available to be implemented.

6. Open Space Inventory

One of the best ways to control and prevent water pollution is to protect the land surrounding the water resource. This is also one of the best ways to protect natural habitat for wildlife and preserve our natural heritage for future generations. Protected Opens Space refers to lands that are protected "in perpetuity" and includes state forests and parks, lands managed by local land trusts, lands with conservation or agricultural restrictions.

According to the EOEA Division of Conservation Services, land is permanently protected if it is owned by the Town's Conservation Commission, one of the State's conservation agencies (i.e. the Massachusetts Department of Environmental Management or the Metropolitan District Commission), a nonprofit land trust (i.e. the Nature Conservancy), or if the Town received State or Federal funds to purchase or improve the property. Private land is considered protected if it has a deed restriction in perpetuity, if an Agricultural Preservation Restriction (APR) has been placed on the property, or if DEP has placed a conservation restriction on it as part of the Wetlands Conservancy Program. Removing land from permanent open space protection status so that it may be developed requires an affirmative vote by two thirds of the State Legislature. In most cases, the watershed district would be required to show the Massachusetts Department of Environmental Protection just cause for converting the use of the land.

A town-owned parcel of land under the authority of the Select Board and not the Conservation Commission, is considered to have limited protection. The parcel in question could be called a wildlife sanctuary, but not have the long-term protection afforded by Conservation Commission lands. Without permanent protection status, and a legal restriction on uses attached to the deed, it is possible that town-owned parcels could be converted to school playgrounds, parking lots or other town uses, upon Town meeting approval to do so. The level of protection afforded publicly-owned parcels with limited protection depends on the policies of each community.

a) Public and Non-Profit Parcels

More than twenty-five conservation and recreation sites lie within the Town of Ashburnham. Approximately seventy-six percent of this land is permanently protected. According to the Massachusetts Executive Office of Environmental Affairs, Division of Conservation Services, public land is protected if it is owned by the town's Conservation Commission or Water Department, one of the state's conservation agencies (i.e. MassWildlife), or if the town received state or federal funds for the purchase or improvement of the property. Land owned by the Parks and Recreation Department or school department is usually not protected. Private land is considered protected if it is owned by a nonprofit land trust (i.e. Massachusetts Audubon Society) or has a deed restriction protecting it in perpetuity.

Acreage of Permanently Protected Open Space

Property Owner	APR	CR	FEE	Grand Total
State				
CHRISTIANSON DAVID M			65.0	65.0
COMMONWEALTH OF MASS		336.0	996.9	1,332.9
FOREST LAND PRES & RLTY TST		75.0		75.0
PARKKONEN JUHA			80.5	80.5
ROCKWOOD PAUL C			465.0	465.0
Subtotal		**411**	**1,607.3**	**2,018.3**
Town of Ashburnham			50.0	50.0
Private				
Mass Audubon Society				
LADNER BRUSO INC		396.0		396.0
Mount Grace Land Trust		165.8		165.8
		10.0		10.0
New England Forestry Foundation				
PEABODY WILLIAM G		43.6		43.6
BENNETT CONSTANCE K	43.0			43.0
CONVERSE WILLIAM K			32.0	32.0
FENTON DAVID J JR TSTEE			48.5	48.5
ROCKWOOD PAUL C		127.0		127.0
EAST WEST FOUNDATION INC		448.3		448.3
NORTHEAST WOOD DESIGN, LLC.		24.3		24.3
Total	**43.0**	**1,625.9**	**1,737.8**	**3,406.8**

Source: MassGIS

A few public and non-profit entities own parcels of land throughout Ashburnham that contribute to the town's supply of open space. Comprising a significant portion of Ashburnham's total acreage, they play an important role in satisfying wildlife and community needs. The following inventories significant public and non-profit open lands in town and examines their potential as conservation or recreation areas.

(1) Permanently Protected Parcels of Conservation & Recreation Interest

Ashburnham State Forest - This 1,592-acre forest is laced with old logging roads that are informally used for hiking and cross-country skiing. Since the Department of Environmental Management (DEM) does not wish to encourage recreational uses, no public facilities or formal access points exist.

High Ridge Wildlife Management Area - Spanning the communities of Ashburnham, Gardner and Westminster, this 2,049-acre park is a designated Watchable Wildlife Viewing Area. Open grasslands and their associated bird communities are featured attractions. Mixed hardwood and white pine stands are inter-mingled with wetlands and fields, offering a diversity of habitat types. Hiking, biking, cross-country skiing, hunting, and fishing are popular

activities among visitors who access the park from the Smith Street parking area along Route 140 in Gardner. There are no designated access areas in Ashburnham.

Mount Watatic - In July 2002, the Department of Environmental Management, Massachusetts Division of Fisheries and Wildlife, Ashby Land Trust, and Ashburnham Conservation Trust purchased the 280-acre summit of Mount Watatic. Mount Watatic is the last undeveloped bald-topped mountain east of the Berkshires. An inaccessible water tower dominates the summit, which reaches an elevation of 1,832 feet, but a second rocky peak offers spectacular, unobstructed views that extend in all directions: to Boston in the east, across much of central and western Massachusetts, and to the Green Mountains of Vermont to the north and the mountains of southern New Hampshire to the northeast. Hikers can follow the famous Mid-state trail through stands of birch, hemlock, spruce, and white pine. The Wapack Trail begins at the foot of Mount Watatic and passes over a number of ridges before reaching the summit of North Pack Monadnock in Peterborough, New Hampshire. Mount Watatic is home to numerous bird species interesting to birder watchers including blue birds, raptors and warblers.

Watatic Mountain Wildlife Sanctuary - This beautiful 139-acre park located in Ashburnham and Ashby is traversed by the Mid-State and Wapack Trails. Additional recreational activities include cross-country skiing and horseback riding. Parking can be found off Route 119. According to the *Ashburnham Open Space and Recreation Plan 2001*, the Fitchburg Sportsman Club owns 1,000 acres that abut the Sanctuary. In the event that the club dissolves, they plan to grant the land to MassWildlife.

Lake Wampanoag Sanctuary - The Massachusetts Audubon Society owns 443 acres of woodlands and wetland habitat in Ashburnham and Gardner. A Priority Site for Rare Species Habitat, the Lake Wampanoag Sanctuary contains a number of certified vernal pools, four ponds, and a "spruce/ moose" habitat that is rarely found in Massachusetts. Currently the public accesses the Sanctuary for nature walks and birdwatching. A small lot off Raymond Street in Gardner provides parking for visitors. There, an informational kiosk marks the beginning of a mile-and-half trail that passes through a 34-acre meadow mowed for bobolink habitat. The site abuts land owned by the Monadnock Trust.

Dunn Wildlife Sanctuary and Woodlot - This 51.3-acre parcel was donated to the Mount Grace Land Conservation Trust in 1991 by an aging landowner who wanted the forest preserved and actively managed. Visitors are invited to hike along the dirt trails. Parking is available off of Dunn Road. Presently the sanctuary is not handicapped-accessible.

Bluefield Reservation – Located in North Ashburnham, the 24-acre, town-owned Bluefield Reservation contains a stream and wetlands that are part of the Millers River watershed.

Whitney/Dunn Conservation Area – Local landowners donated this 22-acre parcel to the Town. It abuts the town-owned Bluefield Reservation.

Ashburnham Town Forest – Located across the street from the Bluefield Reservation and Whitney/Dunn Conservation Area, and abutting a fourteen-acre parcel of state-owned land, the Ashburnham Town Forest contains 50 acres of upland forest and wetlands. Nearly three decades ago, local high school students forged and marked a nature trail, which became known as the Bluefield Trail. After years of neglect, the Ashburnham Conservation Trust recently revamped the trail.

Gardner Water Supply District Lands – The City of Gardner owns 185 acres of densely wooded land in Ashburnham, along the border between Ashburnham and Gardner. Because the area is safeguarded for the City's water supply, it is of limited recreation value to Ashburnham residents. However, its close proximity to the Lake Wamponoag Sanctuary enhances its wildlife habitat value.

Cemeteries – Ashburnham contains five cemeteries: New Cemetery, Meeting House Hill, Fairbanks Cemetery, Saint Dennis Cemetery, and a small unnamed cemetery. Cemeteries provide important habitat for small critters, including meadow birds.

(2) Unprotected Parcels of Conservation & Recreation Interest

Briggs Elementary School – Located along Williams Road in South Ashburnham, Briggs Elementary School contains a playground that is available after school hours and during the summer. Behind the school, Oakmont Regional High School students built a 1/2 mile nature trail. The trail winds through a mixed forest and is home to a vernal pool and a variety of wildlife.

Oakmont Regional High School – Situated on the border between Ashburnham and Winchendon, the Oakmont Regional High School has a variety of outdoor recreation facilities that may be used by Ashburnham residents for a nominal fee. Facilities include a track, multi-purpose fields, and tennis courts.

Sweeney Memorial Playground – For several years, this playground and its basketball courts suffered from poor maintenance that rendered the playground equipment unsafe. Due to the fundraising efforts of the Friends of Sweeney Playground, new playground equipment was installed in 2002.

Winchester Park – Located on the Town Common, Winchester Park is home to a playground, picnic tables and benches in excellent condition. Ashburnham residents enjoy summer concerts at the park's bandstand. The park was recently constructed using private funds, with an additional endowment for maintenance.

Marden Field and Bickford Field – Adjacent to each other, these little league fields are maintained by the Parks and Recreation Department. They contain bleachers, benches and a scoreboard. In 2002, irrigation systems were installed at Marden Field and Bickford Field.

Whitney Field – Located in South Ashburnham, the Parks and Recreation Department also maintain this little league field. The Parks and Recreation Department hopes to install an irrigation system in 2004.

Williams Road Multi-use Field – In 2000, the Town constructed this multi-use field on Williams Road. In 2001 the Town installed a fence surrounding the field and the Town received excess fill from the Oakmont School project to create a substantial parking area around the field.

Bresnahan Pool – The impoundment of Phillips Brook created Bresnahan Pool, a 2.7-acre basin. The pool is the only public beach facility in town, but it was closed several years ago due to irreparable damage. A significant amount of public support and financial resources are needed to reopen and maintain this facility.

Cushing Academy – Located within Ashburnham Center, the campus contains approximately 25 acres of well-maintained athletic fields for soccer, field hockey, football, lacrosse, baseball, and softball, as well as tennis courts. Cushing Academy allows Ashburnham residents to use their tennis courts.

Intervarsity at Toah Nipi – This Christian retreat center owns 132 acres of woodlands, fields and wetlands in the northeast section of town, on the New Hampshire border. It abuts Chapter land owned by the East West Foundation.

Camp Wellville – Owned by the Rollstone Congregational Church, Camp Wellville consists of 40 wooded acres on the western shore of Lake Winnekeag. Containing 400 feet of shoreline, this seasonal use facility offers a private beach, meeting space and overnight accommodations.

Camp Winnekeag – Also situated on Lake Winnekeag, Camp Winnekeag consists of 42.5 acres of land owned by the New England Conference of Seventh Day Adventists. Containing 770 feet of shoreline, this facility operates a school, cafeteria and overnight accommodations. During the summer, the church sponsors a nationally acclaimed camp for the blind. The Mid-State Trail intersects the forested area of the Camp.

Nashua Valley Council of the Boy Scouts of America – 105 acres of forest, open fields and wetland, and 800 feet of Lake Winnekeag shoreline is owned by the Boy Scouts of America. The Split Rock Trust leases Camp Split Rock to the Boy Scouts.

Monadnock Trust – Established to preserve pristine woodland and wetlands that serve as priority habitat for rare species, the Monadnock Trust owns 313 acres of land surrounding Lake Wampanoag. The land abuts protected open space owned by the Commonwealth of Massachusetts and the Massachusetts Audubon Society.

b) Private Parcels

Massachusetts has adopted several initiatives aimed at curbing the rapid rate at which forests, farmland and other open spaces are converted to industrial, commercial and residential development. Privately owned parcels contribute to the amount of open space in Ashburnham through deed restrictions, conservation easements and tax abatement programs. However, these provisions offer varying degrees of protection. For instance, lands under the Farmland Assessment Act can be taken out of the program at the landowner's will while lands enrolled in the Agricultural Preservation Restriction Program are permanently protected.

(1) Farmland Assessment Act

So as to promote the conservation of natural, agricultural and horticultural lands, Chapter 61, Chapter 61A and Chapter 61B of the Farmland Assessment Act enables qualifying forest, farm and recreational lands to be taxed at their use value rather than full market value. Landowners intending to sell these lands or discontinue their open space use are required to notify the town so that it may exercise its right of first refusal. Also, a penalty in the form of either a conveyance tax or a roll back tax is assessed. This allows the Town to protect individual open space parcels as they enter the market or become threatened by development. Drawbacks to the program are that the land is often prohibitively expensive and, when notice is given, usually too little time remains for the town to act. According to the *2001 Open Space and Recreation Plan*, the following is an accurate breakdown of Ashburnham properties enrolled in each of the tax classifications:

1) Chapter 61 (Forestry) Properties: 5,533.97 acres
2) Chapter 61A (Agriculture) Properties: 1,178.07 acres
3) Chapter 61B (Recreation) Properties: 829.96 acres

Under the Massachusetts General Tax Laws, Chapters 61, 61A, and 61B, landowners who are willing to keep agricultural, forested, or recreational lands open are given a tax abatement. These lands are not considered protected, however, in that the landowner can opt to remove his lands from the program and develop them. Should the owner choose to transfer the land, the town is given the right of first refusal, unless the transfer is to a family member.

Lands in the forestry program are listed for ten-year periods, during which time the land is generally used for forestry purposes. Logging practices are subject to State law governing cutting practices and large-scale operations must conform to laws and regulations governing erosion control. Ashburnham has currently has 3,936 acres listed in Chapter 61 Forestry.

Lands listed in the Agricultural Program (Ch 61 A) must be updated annually. Agricultural practices may be either active or passive, and can include the buildings and roads required for farming the land. Ashburnham has a total of 486 acres currently listed in Chapter 61A

Lands listed in the Recreation Program (Chapter 61 B) are used for private camping grounds, sportsmen's clubs, and recreational facilities. These lands must also be updated annually.

Open Space with Temporary Protection through Chapter 61

Property Owner	Acreage
Chapter 61 Forestry	
AHLIN RICHARD M	16.9
BACHMANN WALFRED	65.0
BEALS GEORGE C TST	651.0
BROWN GERALD L	86.4
COLLAR LESLIE D	62.1
CONVERSE WILLIAM K	32.0

CROCKER ALFRED C	10.0
DAMON RICHARD A JR	12.3
DONOVAN WILLIAM P	207.6
DUNN PAUL C	25.0
FITCHBURG SPORTS MENS CLUB	883.0
FRENETTE PAULA & ED	23.0
HAGELBERG WILLIAM A	19.0
HIGGINS-STEELE ROBERT E.	70.6
HILDRETH RICHARD C	117.0
HJELM STEVEN H	77.3
HOUGHTON WILL	18.6
JOHNSON WOODWARD T	111.2
LEVAUX HOWARD A	91.0
LEWIN RODERICK W	30.3
LEWIS INGALLS DAVID	248.4
MARBLE RICHARD W	179.0
OJANEN ESKO & TAIMI	72.8
PACKARD JOHN C	35.0
PAGE RICHARD A T/E	7.6
PELTOLA GILBERT E	12.7
POSSICK SIDNEY	154.0
ROCKWOOD PAUL	36.3
ROCKWOOD PAUL C	110.0
ROCKWOOD PAUL C	5.5
ROMANSON WALTER W	32.7
SPACEK WAYNE L	6.0
TAPPLY ETHEL M	46.5
THERRIEN NORMAN G	115.0
VAN HAZINGA KENNETH A	22.9
VAN HOOF ROBERT L	69.8
WANTANEN EDWIN A	41.8
WRIGHT CANDACE	130.9
Total	**3,936.0**

Property Owner	**Acreage**
Chapter 61 Agriculture	
CROCKER ALFRED C	101.3
DENNIS MARSHALL W	42.0
HAMELIN ROBERT L	40.0
JAILLET JOSEPH H	30.7
SPACEK WAYNE L	30.0
THIBERT GERARD A	221.4
WRIGHT CANDACE	20.5
Total	**485.9**

Chapter 61 B (Recreation)	**Acreage**
BAKER LYLE	7.0
DAMON RICHARD A JR	7.8
DAVID BRUCE	9.3
EASTERN MASS BEAGLE CLUB	385.0
HAGELBERG TAUNO O	22.0
HAYES STEVEN E	60.0
MAHON EARL D & JUNE B	18.0
VACHON MICHAEL E	2.3
WIINIKAINEN TOIVO B	21.8
Total	**533.2**

(2) Agricultural Preservation Restriction (APR) Program

The aim of the APR Program is to make it economically feasible for farmers to continue farming. Administered by the Massachusetts Department of Agricultural Resources, this program offers farmers the difference between the "fair market value" and "agricultural value" of their land. In exchange, a permanent deed restriction is placed on the property, which precludes uses that may harm the agricultural viability of the land. The farmer continues to own and can sell the land, but only for agricultural uses. According to the Assessor's Office, only one farm in Ashburnham is enrolled in the APR Program. The Reed Farm on Corey Hill Road consists of 41.62 acres.

(3) Conservation Restrictions

According to the *Ashburnham Open Space and Recreation Plan 2001*, the Rockwood Trust owns 465 acres of restricted land abutting the Ashburnham State Forest, on Ashburnham Road.

7. Landscapes or uses of historic, scenic, or local "sense of place" significance

Ashburnham is a beautiful, quiet town with a pleasing rural character defined by its picturesque lakes, babbling brooks, rolling hills, lush woodlands, and fertile farm fields. Many local roads are winding lanes flanked by woods, fields, stonewalls, and historic homes that enhance the Town's rural qualities. Because of the town's undulating topography, interesting glimpses of distant mountains, farmland and lakes are seen from various locations. The summit of Mount Watatic affords panoramic views of Boston, Worcester and New Hampshire.

In accordance with the provisions of Massachusetts General Law Chapter 40, Section 15C, Ashburnham designated the following local roadways as scenic: Bush Hill Road, Cashman Hill Road, Corey Hill Road, Cushing Street, East Rindge Road, Hastings Road, Lashua Road, Packard Hill Road, River Styx Road, Russell Hill Road, Wilker Road, Willard Road, and Young Road. This designation affords some protection to shade trees and stone walls within a public right-of-way. Prior to the removal of these features, applicants must petition the Planning Board for written approval. The Planning Board then holds a public hearing and solicits feedback from abutters and other municipal boards, committees and commissions prior to making a decision.

In addition to its scenic resources, Ashburnham also contains features of historic and cultural significance. The Town is fortunate to have several architectural gems, including the Historical Society building (1835), Community Church (1836), Stevens Library (1890), Fairbanks Memorial Town Hall (1904), and Dolly Whitney Adams School (1905). The main building of Cushing Academy, a world-renown college preparatory and post-graduate school, dates back to 1875. Several examples of early nineteenth century worker housing exist along Fitchburg Road at Blackburn Village, as well as the Foss and Lester White's houses in Factory Village. Better examples of worker housing are found on Puffer and Central Streets in Ashburnham Center. Located at the intersection of Route 12 and Route 101, the Ashburnham Center Historic District was included in the National Register of Historic Places in 1999. The district consists of well-preserved residential, public and commercial structures of Italianate and Greek Revival architecture that date from the mid-18th through early 20th centuries.

Through Massachusetts General Law Chapter 40, Section 8d, the Ashburnham Historical Commission is charged with preserving and protecting the distinctive characteristics of buildings and places significant to the history of the Commonwealth of Massachusetts and the Town of Ashburnham. To that end, the Commission participates in a variety of historic preservation activities, including preserving, restoring and protecting historic properties, working on Historic District designations, installing commemorative markers and plaques, and maintaining archives of files and photographs and a repository for prehistoric and historic artifacts. The Commission also enforces the provisions of the Town's Demolition Delay Bylaw, which mandates a minimum 14-day delay in the demolition of National Register-listed buildings, as well as other buildings meeting certain criteria, so that an adequate assessment of the proposed changes and resulting impacts may be conducted.

E. LAND USE SUITABILITY

Analysis of land use suitability for various types of development provides a useful decision making tool to aid the community in mapping out its sustainable future. Land Use Suitability is based upon a careful analysis of the exist-

ing resources in the community and the prior evolution of the community. The land use suitability map is based upon three maps that illustrate the resources in the community: water resources, wildlife habitat, and existing land use and infrastructure. These maps serve as the basis for delineating the lands that are most suited for development and lands that are most desirable to either protect from development or develop in a manner that recognizes resource protection concerns.

The land use suitability map illustrates the level of sensitivity land areas in the community have to encroaching development. The map is an overlay of the resource maps and a summary of the priorities the community has for both protection and development. The overlay process identified those lands that are the most environmentally fragile and thus desirable to protect, and those areas that are most suited for new development. The value is based upon assessing the number of natural resources present, on the theory that the greater the number of natural resources, the greater the sensitivity to development and the more critical the area is to protect. The Land Use Suitability Map also serves as the base map for evaluating the community vision illustrated at the community forum. The composite map defined by the residents and displayed at the Forum is overlaid onto the suitability map to visually describe the levels of sensitivity present in the areas delineated by the residents for housing, economic development, and protection.

1. Public Forum

At the Ashburnham Public Forum held on August 12, 2003, the residents and Town leaders, reviewed three maps that served as the basis for identifying areas well suited for future development and areas that should have high priority for future protection strategies. Participant were asked to examine the maps and mark them with their priorities for economic development, housing and protection.

Afterward, MRPC Geographic Information Systems specialist Jason Stanton coded the information into a graphic representation of the markings on each map for visual interactive display using a live demonstration of GIS capabilities. He overlaid the markings onto the three visual representations of the maps, highlighting areas with similar value for protection or development in each of the three maps, including areas where existing development has occurred, areas of Brownfields, and other areas that can be redeveloped, and areas served by infrastructure.

2. Draft Land Use Suitability Map

The Draft Land Use Suitability Map illustrates the land area in the town, categorized by residentially developed land and by the natural resource value of the land. The value is based upon assessing the number of natural resources present, on the theory that the greater the number of natural resources, the greater the sensitivity to development and the more critical the area is to protect. This map serves as the foundation for an analysis of the current land use practices and the potential future impacts to the remaining developable land as estimated under the buildout analysis conducted by the Montachusett Regional Planning Commission for the Executive Office of Environmental Affairs in 2000. These analyses illustrate how well the local land use practices and the zoning districts in place at the time of the buildout analysis fit with the community vision and the need to protect valuable natural resources. See Appendix E for a description of the methodology and resource weighting.

These four maps will be useful to the community to determine public goals for areas to be protected by zoning or acquisition or other means, and to determine which areas of community should be designed for residential and commercial and industrial uses. The Draft Land Use Suitability Map also serves as the base map for evaluating the community vision illustrated at the community forum. The composite map defined by the residents and displayed at the Forum is overlaid onto the draft suitability map to illustrate the levels of sensitivity present in the areas delineated by the residents for housing, economic development, and protection. At the Forum, residents identified several areas as priorities for protection, four small areas as appropriate for housing projects, four sites for potential as economic development areas, and two areas that needed transportation improvements.

P1) The northern tier of Ashburnham was recommended for protection due to its abundant water resources, relatively unfragmented forests, extensive Chapter 61 land holdings and its value for establishing an east/west trail and wildlife corridor linkage. The Conservation Commission prioritizes protecting all of the water resources flowing to Wallace Pond, Lake Watatic, Lower Naukeag Lake, and Sunset Lake. The eastern portion of the region, along Route 119, was recently rezoned for "green" business, however, the Conservation Commission does not support this zoning change and would like to see it repealed. The entire corridor, from Wallace Pond to Route

101 is noted for its wetlands. It is also a BioMap Core Habitat surrounded by supporting natural landscape. The summit of Mount Watatic, which overlooks the area, is a Priority Habitat for Rare Species, as is the wetland area on route 119 near Old Pierce Road.

P2) The watershed of Upper Naukeag Lake was viewed as an area requiring protection though extensive tracts of this land are considered 'permanently protected' because they protect the water supply of Upper Naukeag Lake. The area is designated as Outstanding Resource Waters. Areas on the perimeter of Upper Naukeag Lake appear to need protection, particularly along Lake Road.

P3) The Mid State Trail passes through Ashburnham, linking Mount Watatic to such destinations as Leominster State Forest and Mount Wachusett to the south. The Mid State Trail Committee is actively working to secure permanent easements or other permissions from property owners over the length of the Trail to ensure its future in perpetuity. This should be a State priority.

P4) The area containing Marble Pond and its tributaries was considered an area in need of protection due to its undeveloped state. The entire complex of ponds: Stodge Meadow, Marble, Ward, and Watatic, warrant protection of their shorelines against nutrient enrichment. Three areas in the vicinity were recommended as appropriate sites for housing. Open Space Residential Design subdivisions employing design standards that minimize stormwater impacts and mitigate nutrient enrichment should be the development model for housing in these areas.

P5) Mount Hunger was recommended for protection to protect scenic vistas and the Mid State Trail. It is at the heart of a relatively unfragmented contiguous natural landscape that has value as a supporting area for core habitat.

P6) The Phillips Brook and Factory Village Pond area along Route 12 was a priority for protection to preserve the Brook and its tributaries. The Brook flows from the center of Town, southeast through Blackburn Village, into Westminster. This protection area intersects that of the Mid State Trail. Protecting this corridor is also compatible with neighboring Westminster's goals to protect its rural uplands and its water resources in the northeast corner of that town, and it supports similar goals in Fitchburg. The center of Town and the Route 12 corridoer were also recommended for economic development. Proximity to Phillips Brook and Factory Village Pond make the area sensitive. Should the town decide to encourage economic development there, design standards should be employed to protect these water resources. Developments should integrate the Brook in a manner that enhances the brook and takes advantage of its aesthetic value.

P7) Forum participant recommended establishing a pedestrian trail linkage between the Mid State Trail (Blackburn Village) and South Ashburnham. Such a trail could provide a useful linkage between residnetial neighborhoods recommended for Cashman Hill Road and Willard Road. The area has value as unfragmented continuous natural lands and Wiullard Road has a wetland area to the south. Open Space Residential Design subdivisions can help to preserve these features to retain the rural character and provide for a trail linkage.

P8) The Whitney Pond area is a priority for protection since it is surrounded by wetlands. At the center of South Ashburnham is the Whitman River, flowing from Lake Wampanoag. Some forum participants recommended locating housing in the same area, which represents a conflict. It would be preferable to locate the housing further from Whitman River and Whitney Pond. The area was also recommended for economic development with a housing component. A mixed-use New England village concept can accommodate both, with economic development focussing on the needs of village residents. This concept would be compatible with similar concepts recommended for Westminster in its Master Plan.

P9) The watershed for Lake Wampanoag is a protection priority. The area is largely undeveloped and lies adjacent to a water resource protection Zone B for the Gardner water supply.

P10) Lake Wampanoag is at the southern reach of extensive floodplain alluvium deposits with a large complex of wetlands. The area could prove valuable in the future as a potential water supply area and should be protected. The Town may want to consider exploration for potential groundwater wells, if it has not already done so. Ashburnham state Forest lies at the heart of this area. Protection efforts should focus on the wetlands to the

north and along Route 12. An economic development area was recommended for the vicinity of Route 12 and Depot Road. This area is extensively wet, and has floodplain alluvium surficial geology. Economic development should not be encouraged here unless it is sensitive to these resources. It would be better suited to the area on Depot Road north of Route 12.

3. Land Use Suitability and Current Land Use

The 1999 MacConnell land uses for the community were overlaid onto the Land Use Suitability Map. In this map, all the developed land from Buildout Map 2 is shown as the existing underlying land use (broken into the 11 land use codes from MassGIS/MacConnell). The Open Space and Municipal lands are shown as solid white.

The historic pattern of development occurred as people built roads to follow the water courses, to access the lakes. As such, it occurred in areas most sensitive to development impacts. Ashburnham is noted for its beautiful lakes and has a long history as a place for vacation homes. Residential development began as summer camps that rimmed the lakes. In recent years, many of these camps have been converted to year -round residences. Soil conditions and small lot sizes have placed a burden on home owners for septic management. Town residents can address this through public education programs aimed at stormwater management, septic management, and lawncare practices. Extension of the sewer system to serve the lakes may be necessary. Careful study of current technologies for community septic systems may offer some alternatives.

4. Land Use Suitability and Developable Lands

The Developable Lands Map from the Buildout Analysis was overlaid onto the Land Use Suitability Map assess the consistency of future growth patterns, based on existing zoning, the community and economic development office, the planning board, the conservation commission, and the Open Space and Recreation Committee. with the Town's identified priorities for land development and protection. The map shows the level of sensitivity of the remaining "undeveloped" lands from the buildout.

The Developable lands data is current to 2000, when the buildout analysis was completed. Since that time, subsequent developments have reduced some of the areas deemed developable, and the buildout now overestimates the remaining development potential of undeveloped lands. It was beyond the scope of this project to incorporate these changes into the land use suitability project, and the town may want to consider commissioning an update of the buildout and the land use suitability with information from the newly released digital color orthophotography, and more recent data from the Planning Board.

Extensive areas of the town within the developable lands show at least one resource present. In most cases, this is due to the unfragmented natural lands of the forested regions. Much of this area has a surficial geology composed of bedrock and glacial till. These areas are more suitable for residential and commercial/industrial development from a resource protection perspective. To the extent possible, development should be steered away from water resource areas such as alluvium floodplains with wetland complexes or areas designated as Outstanding Resource Waters.

By employing Open Space Residential Design principles and mixed use village concepts, housing can be accomodated at higher densities with more efficient provision of water, sewer, and road infrastructure. Such housing projects should be sited near existing villages. Infill development in existing villages is highly recommended, particularly if it is compatible with the existing Colonial New England architecture. Development should not encroach on the floodplain alluvium in the western part of the Town to preserve potential future water supplies and prevent possible contamination of the groundwater resource.

F. RECOMMENDATIONS

1. Manage all water resources to ensure good quality for public consumption, wildlife and recreation.

Ashburnham contains important surface and ground water resources that are at risk of contamination. Upper Naukeag Lake, the public water supply for both Ashburnham and Winchendon, is at risk from on-site septic systems, above ground and underground storage tanks, roads, recreational activities, and wildlife. The water quality of other surface water bodies, including the Whitman River, Lower Naukeag Lake, Lake Watatic, Little Watatic Pond, Wallace Pond, and Ward Pond, has suffered due to inputs of various non-point source pollutants. In order to enhance the quality of these critical resources and protect resources not yet impaired, the Town should consider implementing the following action steps:

- Identify and map the recharge areas of Ashburnham's medium and high-yield aquifers.

- Work with the City of Gardner to determine the best way to protect Gardner's water resources lying within Ashburnham's boundaries.

- Distribute a packet of "Best Management Practices" to homeowners and businesses to protect private ground water resources.

- Investigate options for addressing non-point source pollution. Non-regulatory options include the following:

a) Produce a Watershed Management Plan to pinpoint the definitive causes of accelerated pond eutrophication in Ashburnham, and recommend strategies for minimizing pollution inputs.
b) Limit salt/sand applications to roadways, especially in ecologically sensitive areas alongside rivers, streams, lakes, and ponds.
c) Sweep catch basins twice annually, in the spring and fall.
d) Participate in a regional household hazardous waste collection day or sponsor one annually.
e) Launch a campaign that broadens public awareness of ways residents can help abate non-point source pollution within the watershed. The campaign should include creation of a high-visibility information display at the Library and Town Hall. Environmental agencies, including the United States Natural Resources Conservation Service and the Massachusetts Department of Environmental Protection, have publications that offer detailed information on storm water control measures.

- Extend sewer lines to residential properties on Lower Naukeag Lake and Lake Watatic. Once installed, all dwellings should be required to hook into the municipal sewer system.

- Encourage developers of subdivisions in remote areas to install central sewer treatment facilities if within 1,000 feet of a lake, pond or stream.

- The Town and various lake associations should investigate options for dealing with the noxious aquatic plants that have proliferated many Ashburnham water bodies. The Massachusetts Department of Environmental Protection and Department of Environmental Management can suggest options for managing/removing/controlling the growth of noxious aquatic plants, as well as funding sources for implementing preferred options.

2. Promote Cleanup and Limit Risk of Contamination from Hazardous Wastes.

Like most communities, Ashburnham contains sites contaminated with hazardous wastes. The majority of these sites are residences and small businesses with minor cleanup requirements, others, however, have major cleanup requirements. Serious contamination, or the possibility of serious contamination, often prevents underutilized or abandoned industrial and commercial properties from being returned to active use. Therefore, they continue to sit idle, contribute little to the tax base, threaten the health, safety and welfare of the community, and visually degrade the surrounding community. With this in mind, the Town may wish to implement the following action steps:

- Seek funds from agencies such as the Montachusett Regional Planning Commission (US EPA Brownfield Program funds), United States Environmental Protection Agency, Massachusetts Department of Environmental Protection, Massachusetts Department of Housing and Community Development, and MassDevelopment for the assessment and cleanup of contaminated sites.

- Minimize the incorrect disposal of hazardous materials by residents by sponsoring a community household hazardous waste collection day or participating in a regional household hazardous waste collection day.

- Launch a campaign to educate homeowners and businesses about the proper methods for disposing hazardous wastes, including batteries, household cleansers, oil, and thermometers.

- Assess Ashburnham's Hazardous Spill Response Plan.

- To prevent MTBE contamination, the Planning Board should use the Site Plan Review Process to ensure that facilities that store or handle MTBE or MTBE blend gasoline are designed to contain and/or control spills from process areas, loading, and unloading operations, including customer overfills, drive-offs and spills from any delivery or dispensing activity. Groundwater monitoring wells should be installed down-gradient of any underground storage tank and routinely sampled.

3. Protect Areas of Significance for Biodiversity.

Largely due to the efforts of state conservation agencies, regional land trusts and local nature enthusiasts, Ashburnham has successfully protected vast amounts of significant habitat. However, key habitats remain at risk of fragmentation and destruction. A NHESP BioMap Core Habitat area and Priority Habitat for State-listed Rare Species surrounds Wallace Pond and extends in a southeasterly direction along Route 119 and north to the Ashby town line. Zoned for Green Business, this area is at risk of development. Another Priority Habitat that is at risk of development includes the area surrounding the west and southeasterly shores of Lake Wampanoag. Many areas of BioMap Supporting Natural Habitat and Estimated Habitat for Rare Wildlife are also at risk. Neither state nor local law protects certified vernal pools outside of Areas Subject to Flooding or Ashburnham's 98 potential vernal pools. In order to protect these significant areas for biodiversity, the Town should consider implementing the following action steps:

- Continue careful enforcement of the Wetlands Protection Act and the provisions of the Wetland and Watershed Protection District.

- Involve volunteers (including the boy scouts and public school students) in the verification and certification of potential vernal pools. This task should be incorporated into the science curriculum.

- Create a methodology for rating potential conservation land.

- Involve local nature enthusiasts and students in assessing the biological significance of municipal lands. The next step is to place conservation easements on the most biologically important municipal lands and manage them appropriately. Assistance with the preparation of management plans for Town lands can be sought from state and federal agencies.

- Continue to work in partnership with the Ashburnham Conservation Trust, Massachusetts Audubon Society, and state and federal conservation agencies to protect priority parcels, especially those that link significant open spaces and are designated Priority Habitats for State-listed Rare Species and BioMap Core Habitat areas.

4. Enhance the Number, Variety and Maintenance of Recreation Areas.

Workshop participants and respondents to the 2001 Open Space and Recreation Plan Survey expressed interest in a greater abundance and diversity of recreation resources, and also for improved maintenance. Most desired recreation facilities included public swimming areas, hiking and cross-country ski trails, public access to lakes for boating

and fishing, conservation areas/wildlife corridors, and bike trails. With this in mind, the Town may wish to consider the following action steps:

- Seek funding through the Division of Conservation Services' Self-Help Program for the repair of Bresnahan Pool and replacement of the recreation facilities there. The Town may be able to obtain financial assistance and physical labor for improving the beach and playground from the Ashburnham/Westminster Rotary Club, which often sponsors worthwhile public service projects.

- Recruit the University of Massachusetts' Department of Landscape Architecture and Regional Planning to devise a greenway network for the community. The Program is constantly seeking studio projects to enhance the student's learning experience.

- Investigate the possibility of transforming the old railroad bed that extends from Puffer Street to Williams Road into a multi-purpose trail. Money for the acquisition, design and construction of multi-purpose trails is available through MassHighway's Transportation Enhancement Program, which is administered by the Montachusett Regional Planning Commission.

- Develop a management plan for all recreation facilities, and plan appropriately for capital improvement needs. The management plan should include strategies and a timeline for making recreation facilities ADA-accessible.

5. Develop Financial Plan for the Acquisition and Maintenance of Conservation Lands and Recreation Resources.

One of the biggest challenges that communities face is obtaining the money necessary to purchase open space and maintain recreation facilities. There are many community priorities, but limited financial resources to address needs. During the visioning forum held at the start of this project, several people mentioned the limited tax base as an ongoing challenge. However, respondents to the 2001 Open Space and Recreation Plan Survey were willing to support a variety of options for making open space preservation a reality. In light of the need for funding to accomplish open space and recreation priorities, the Town should consider the following action steps:

- Consider adopting the Community Preservation Act. Signed into law by former Governor Celluci in 2000, The Community Preservation Act enables communities to establish a Community Preservation Fund to acquire and preserve open space, create and support affordable housing, and acquire and preserve historic buildings and landscapes. A minimum of 10% of the annual revenues must be used for each of the three core community concerns. The remaining 70% can be allocated for any combination of the allowed uses, or for land for recreational use. This gives a community the opportunity to determine its priorities, plan for its future, and have the funds necessary to make priorities a reality. The Fund is financed through a surcharge of up to 3% of the real estate tax levy on real property. The Act also created a significant state-matching fund of more than $25 million annually, which serves as an incentive to communities to take advantage of the provisions of this legislation. To date, the annual match is 100%. Municipalities must adopt the Act by ballot referendum.

- Ask Town residents, civic groups and businesses for donations of land, money and services.

- Consider designating funds from the sale of tax-title land to acquire and maintain conservation and recreation areas.

- Pursue grant opportunities available through the Massachusetts Executive Office of Environmental Affairs' Division of Conservation Services, Department of Environmental Management, Department of Environmental Protection, and MassWildlife.

Land Use Recommendations

1. Use Innovative Regulatory Techniques to Counteract Sprawl.

In order to slow development, preserve its rural character and accommodate septic systems in compliance with Title 5 requirements, Ashburnham created large minimum lot size requirements in its residential zoning districts. Ultimately, the buildout of Ashburnham's residential districts will result in sprawling residential development that will degrade the community's rural charm, scenic resources, wildlife habitat, and air quality. Moreover, sprawling development makes it more expensive and inefficient to manage and provide municipal services to residents and businesses. It lengthens school bus routes, and places a greater strain on police, fire, emergency medical services, and the municipal highway department. In summary, the buildout of Ashburnham's residential districts will reduce residents' quality of life while increasing their property taxes. Given this reality, the Town may want to consider the following innovative regulatory techniques:

- Adopt an Open Space Residential Development (OSRD) By-Law, which would encourage developers to protect open space in exchange for reducing infrastructure costs. The same number of homes permissible in a conventional subdivision would be allowed in an OSRD, however lots would be smaller and grouped together on a fraction of the parcel. The remainder of eligible parcels' total acreage, which should be at least 50%, would be permanently protected. To ensure that protected open space provides natural resource and recreation benefits and that development occurs on land most appropriate for it, the Bylaw should recommend a four-step design process. This process, which is successfully employed by several Massachusetts communities with OSRD Bylaws, requires the designation of open space first, based on its resource values; second, the siting of houses; third, planning the road and trail locations; and fourth, drawing in the lot lines.

  To make the construction of an OSRD subdivision preferable to a conventional subdivision, Ashburnham should make the approval process less cumbersome or on par with the approval process for conventional subdivisions. To this end, Ashburnham could exempt OSRD subdivisions from the Developmental Rate Limitation Bylaw. Ashburnham could also allow OSRD subdivisions by right, perhaps with Site Plan Review. A third option is to require developers to submit plans for both a conventional and OSRD subdivision, with the Planning Board choosing the design that is most appropriate for the site. OSRD subdivisions should be permitted in both residential zoning districts, on parcels of at least 10 acres in size.

  The advantages of OSRD zoning can be magnified by offering density bonuses to developers who are willing to do good things for the community, such as make recreation facilities accessible to the general public, preserve more than the minimum required open space, and designate units for those who are 55 years of age and older or considered low or moderate income. It would also be ideal to coordinate OSRD developments on multiple parcels to create entire compact neighborhoods, centered around schools and/or stores, and surrounded by ample open space.

4) Consider adopting Transfer of Development Rights (TDR) zoning provisions. This typically involves the establishment of a "sending district", an area designated for open space protection where development is discouraged or limited, and a "receiving district", an area that can support greater development densities. TDR enables owners of land in the sending district to sell their development rights to owners of land in the receiving district. This strategy is particularly effective when the town has valuable resources that need protection, such as scenic views, historic buildings and critical wildlife habitat and water resources, while other parts of town are suitable for development at densities greater than those currently allowed under zoning.

5) The majority of new residential development in Ashburnham occurs along existing roadways, on Approval-Not-Required (ANR) lots. Ashburnham does not have a mechanism in place for the review of ANR proposals involving the creation of multiple lots. If an applicant submits a plan depicting 20 new lots on an existing roadway, the Planning Board must endorse it if lots meet minimum frontage and access requirements. The Planning Board lacks the authority to review site drainage issues and impacts on the environment, traffic, or neighborhood character.

6) Adopt a provision enabling the municipal review of Major Residential Developments, that is, multiple lots (seven or more) created along an existing roadway. Currently these proposals receive no meaningful municipal review as they are created under the Approval Not Required (ANR) process. A provision could be incorporated into the applicability section of the new site plan review by-law, or within the Town's Subdivision Rules and Regulations. Such a provision would enable the Planning Board to require appropriate measures, including erosion control and stormwater management, to mitigate the cumulative impacts of the proposed development.

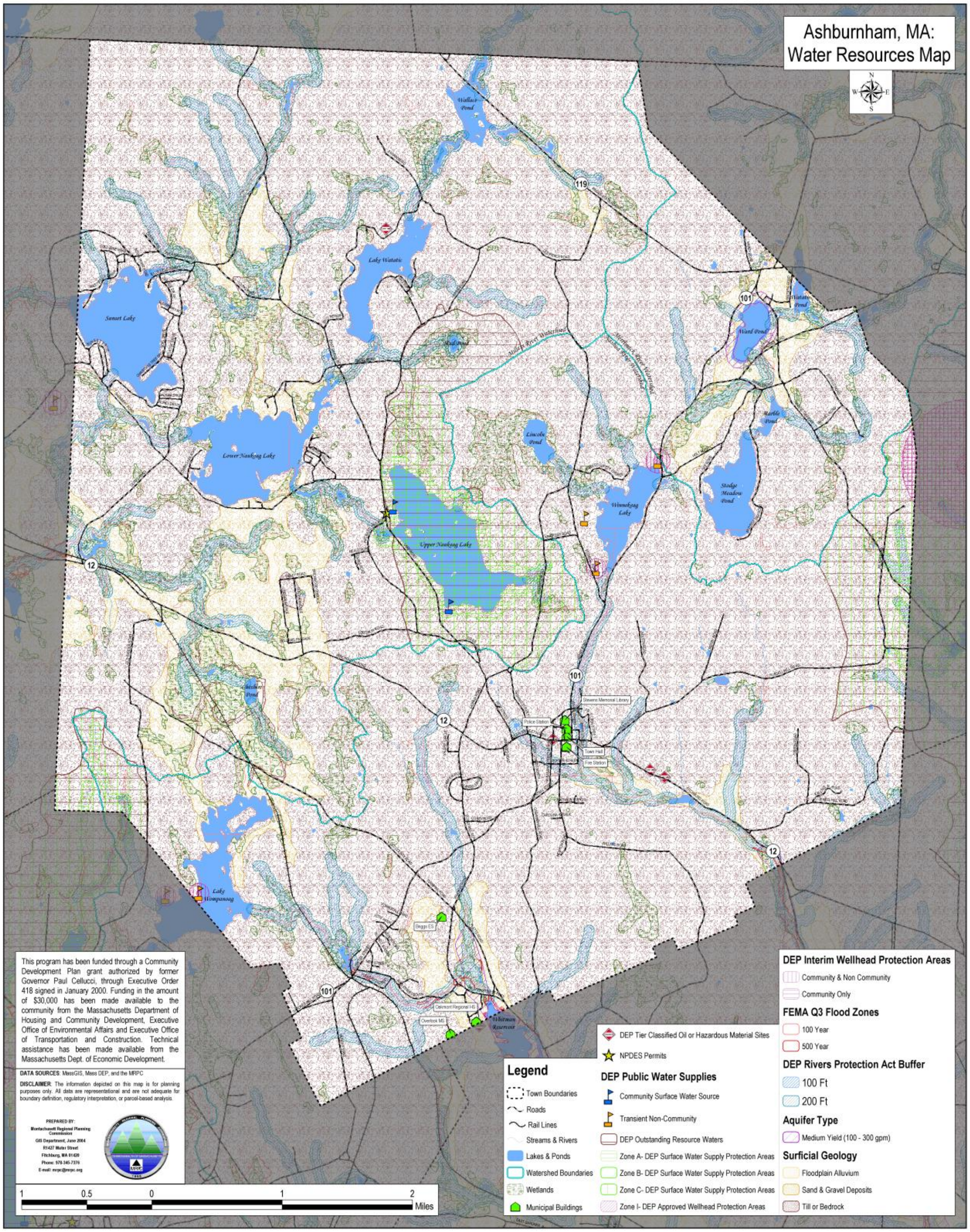
7) Adopt "Backlot" Zoning. As road frontage is developed, a significant amount of inaccessible backland results. One option for accessing this backland is to create a roadway in conformance with the Subdivision Rules and Regulations. To justify the expense of constructing the roadway, landowners may be persuaded to carve the backland into several lots. However, the town-wide adoption of a "backlot" provision will give landowners another option. It will enable those with at least 5 acres of backland and 50 feet of frontage to construct a driveway to service their lot versus a roadway. Provisions can be incorporated into the bylaw to encourage common driveways, prevent odd lot configurations, and limit the number of backlots created under a single development proposal or in close proximity to each other.

8) The Town should consider adopting a Scenic Overlay District that provides additional design and development guidelines for projects in scenic areas. While the uses permitted in the base districts would be unchanged, the provisions of the overlay district would specify standards that help ensure that new development blends into the surrounding landscape. Lands that Sterling may want to incorporate into the Scenic Overlay District are areas within 500 feet of a Scenic Road and prominent ridgelines.

9) Provisions that the Town may want to incorporate into the Bylaw include larger residential building setbacks (i.e. 150 feet) and a 50-foot vegetated buffer requirement. The Town should review development in the Scenic Overlay District to ensure that visual impact is limited. For example, the impact of multiple ANR lots can be minimized through the construction of one driveway to serve up to four lots.

a) Strategies for Developing Recreational Potential

- Work to ensure permanent easements for the Mid-state Trail
- Promote the extension of the Gardner to Winchendon rail trail through Ashburnham
- Develop public swimming site in Ashburnham
- Promote protection of lands on the Mid State Trail
- Monitor Chapter 61 lands for potential acquisition


Ashburnham, MA:
Water Resources Map
N
S
E
W
Wallace Pond
Lake Watatic
Sunset Lake
Lower Naukeag Lake
Upper Naukeag Lake
Lincoln Pond
Winnekeag Lake
Ward Pond
Stodge Meadow Pond
Lake Wampanoag
Whitman Reservoir
Stevens Memorial Library
Police Station
Town Hall
Fire Station
119
101
12
This program has been funded through a Community Development Plan grant authorized by former Governor Paul Cellucci, through Executive Order 418 signed in January 2000. Funding in the amount of $30,000 has been made available to the community from the Massachusetts Department of Housing and Community Development, Executive Office of Environmental Affairs and Executive Office of Transportation and Construction. Technical assistance has been made available from the Massachusetts Dept. of Economic Development.
DATA SOURCES: MassGIS, Mass DEP, and the MRPC
DISCLAIMER: The information depicted on this map is for planning purposes only. All data are representational and are not adequate for boundary definition, regulatory interpretation, or parcel-based analysis.
PREPARED BY:
Montachusett Regional Planning Commission
GIS Department, June 2004
R1427 Water Street
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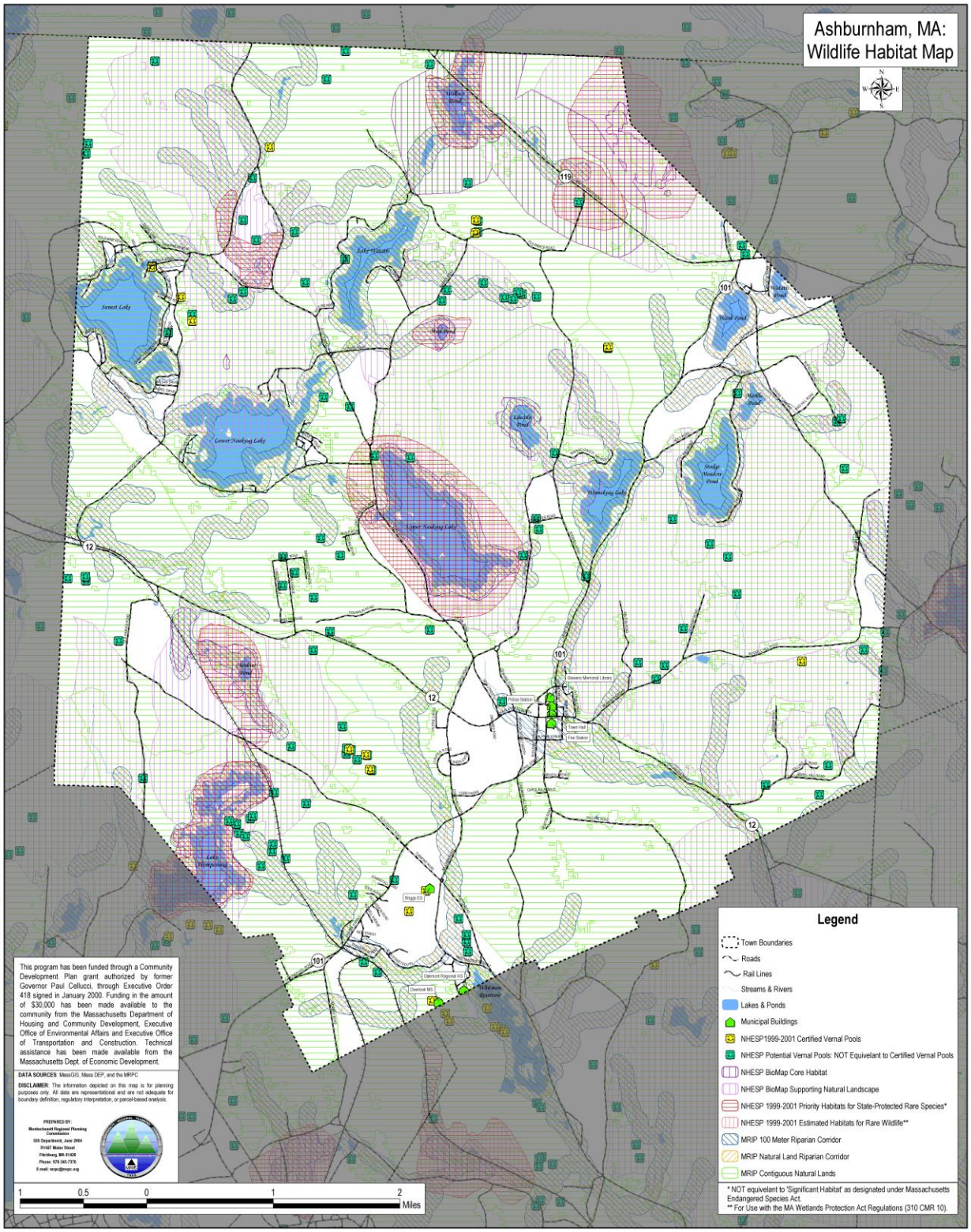
1 0.5 0 1 2 Miles
Legend
Town Boundaries
Roads
Rail Lines
Streams & Rivers
Lakes & Ponds
Watershed Boundaries
Wetlands
Municipal Buildings
DEP Tier Classified Oil or Hazardous Material Sites
NPDES Permits
DEP Public Water Supplies
Community Surface Water Source
Transient Non-Community
DEP Outstanding Resource Waters
Zone A- DEP Surface Water Supply Protection Areas
Zone B- DEP Surface Water Supply Protection Areas
Zone C- DEP Surface Water Supply Protection Areas
Zone I- DEP Approved Wellhead Protection Areas
DEP Interim Wellhead Protection Areas
Community & Non Community
Community Only
FEMA Q3 Flood Zones
100 Year
500 Year
DEP Rivers Protection Act Buffer
100 Ft
200 Ft
Aquifer Type
Medium Yield (100 - 300 gpm)
Surficial Geology
Floodplain Alluvium
Sand & Gravel Deposits
Till or Bedrock


Ashburnham, MA:
Wildlife Habitat Map
Legend
Town Boundaries
Roads
Rail Lines
Streams & Rivers
Lakes & Ponds
Municipal Buildings
NHESP1999-2001 Certified Vernal Pools
NHESP Potential Vernal Pools: NOT Equivelant to Certified Vernal Pools
NHESP BioMap Core Habitat
NHESP BioMap Supporting Natural Landscape
NHESP 1999-2001 Priority Habitats for State-Protected Rare Species*
NHESP 1999-2001 Estimated Habitats for Rare Wildlife**
MRIP 100 Meter Riparian Corridor
MRIP Natural Land Riparian Corridor
MRIP Contiguous Natural Lands
* NOT equivelant to 'Significant Habitat' as designated under Massachusetts Endangered Species Act.
** For Use with the MA Wetlands Protection Act Regulations (310 CMR 10).
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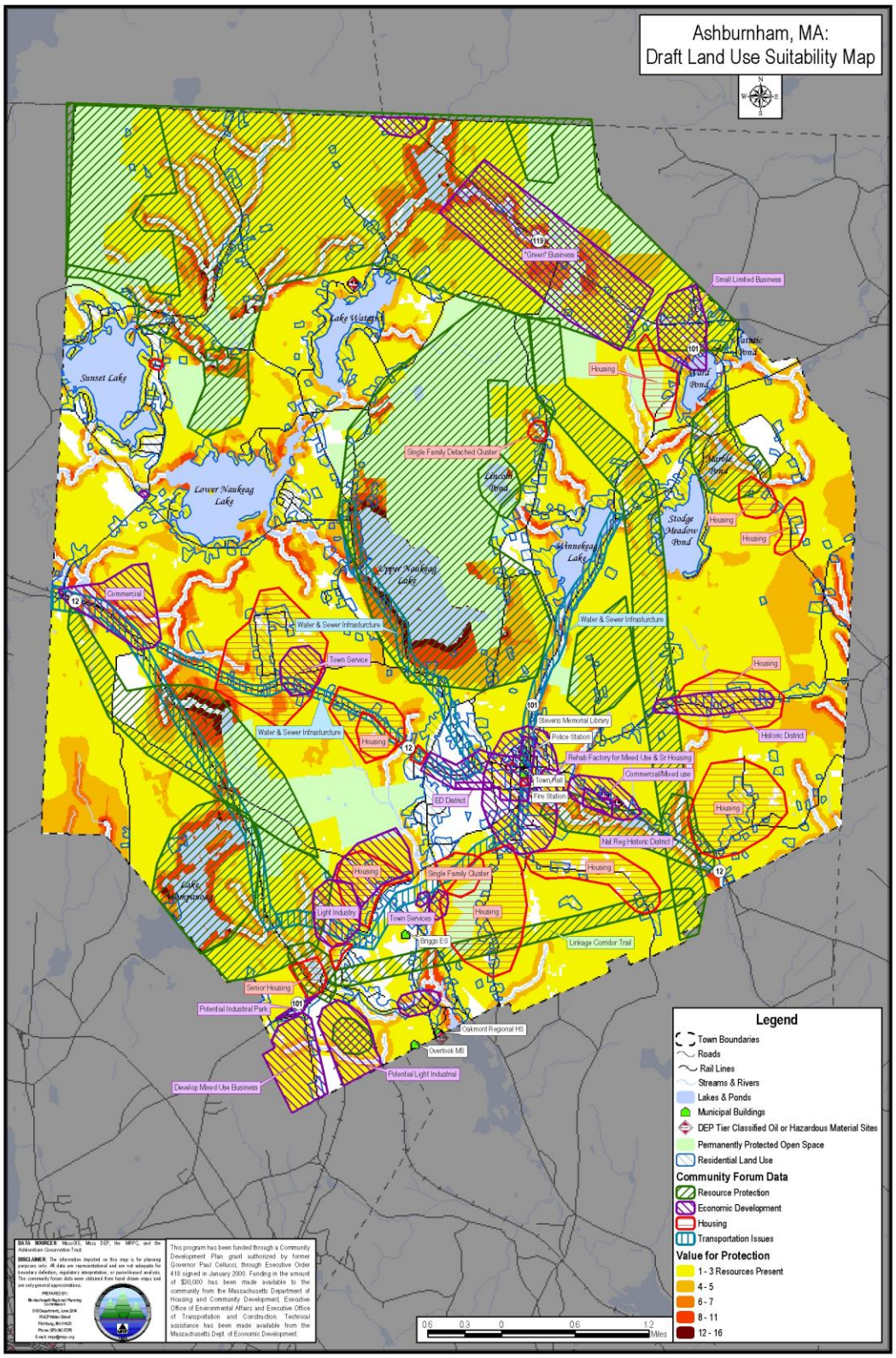
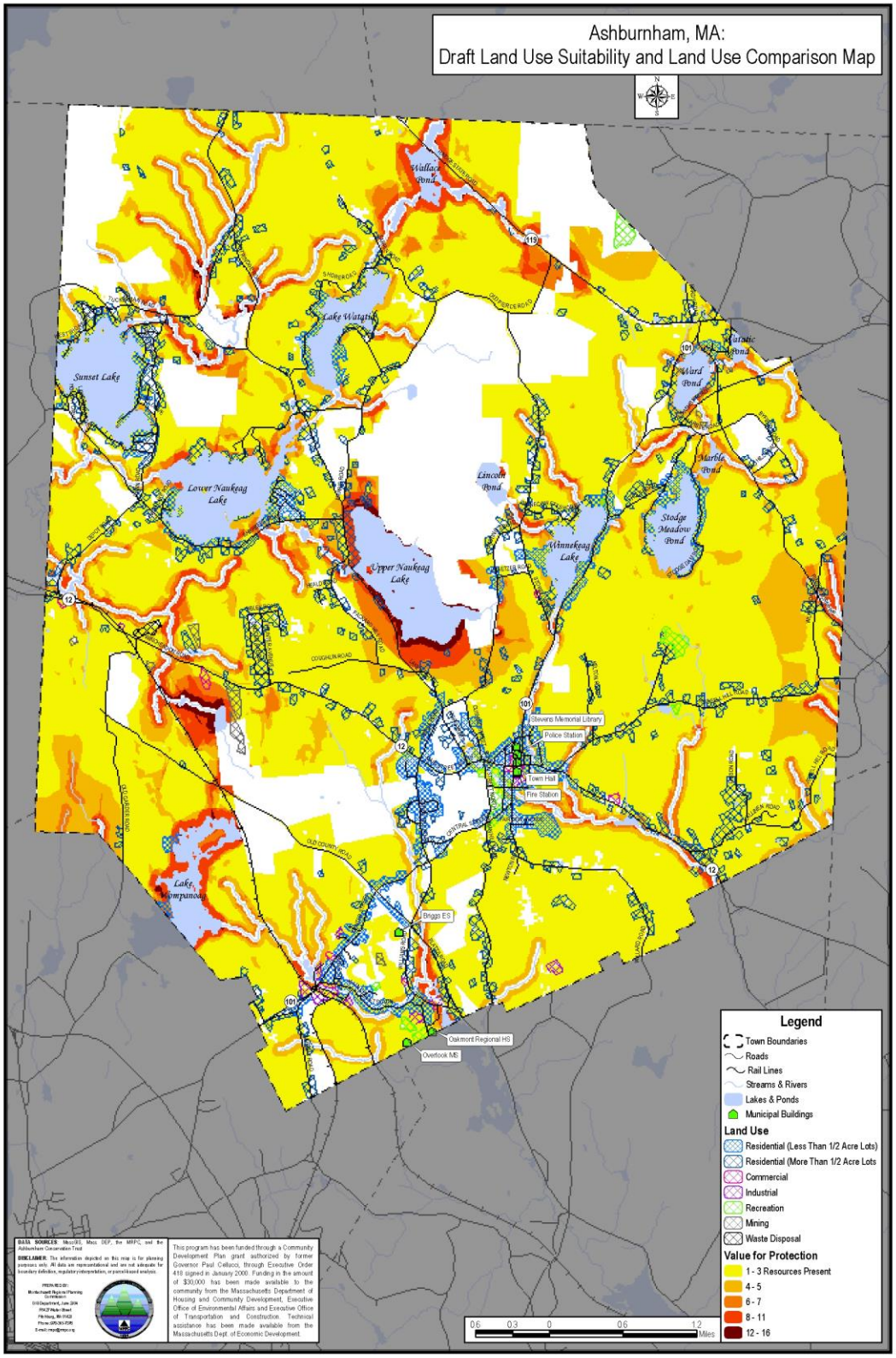
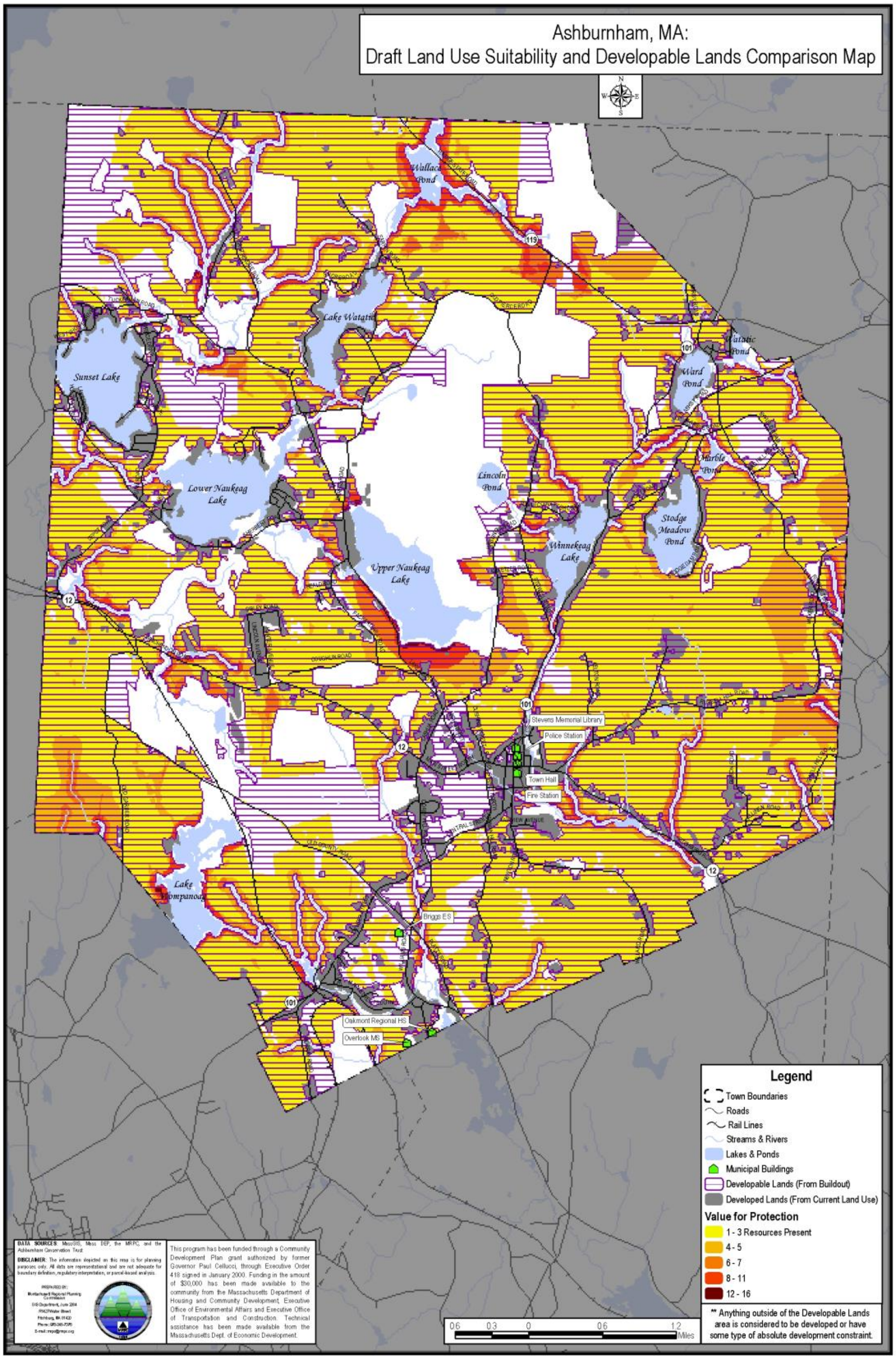

Ashburnham, MA:
Draft Land Use Suitability Map
Legend
Town Boundaries
Roads
Rail Lines
Streams & Rivers
Lakes & Ponds
Municipal Buildings
DEP Tier Classified Oil or Hazardous Material Sites
Permanently Protected Open Space
Residential Land Use
Community Forum Data
Resource Protection
Economic Development
Housing
Transportation Issues
Value for Protection
1 - 3 Resources Present
4 - 5
6 - 7
8 - 11
12 - 16
Miles
Lake Watatic
Sunset Lake
Lower Naukeag Lake
Upper Naukeag Lake
Lincoln Pond
Winnekeag Lake
Stodge Meadow Pond
Marble Pond
Grand Pond
Lake Shirley
"Green" Business
Small Limited Business
Single Family Detached Cluster
Commercial
Water & Sewer Infrastructure
Town Service
Housing
Stevens Memorial Library
Police Station
Rehab Factory for Mixed Use & Sr Housing
Commercial/Mixed use
Town Hall
Fire Station
ED District
Historic District
Nat'l Reg Historic District
Single Family Cluster
Light Industry
Town Services
Briggs ES
Linkage Corridor Trail
Senior Housing
Potential Industrial Park
Oakmont Regional HS
Overlook MS
Potential Light Industrial
Develop Mixed Use Business


Ashburnham, MA:
Draft Land Use Suitability and Land Use Comparison Map
Wallace Pond
Lake Watatic
Sunset Lake
Lower Naukeag Lake
Upper Naukeag Lake
Lincoln Pond
Minnekeag Lake
Stodge Meadow Pond
Marble Pond
Willard Pond
Watatic Pond
Lake Wampanoag
Stevens Memorial Library
Police Station
Town Hall
Fire Station
Briggs ES
Oakmont Regional HS
Overlook MS
Legend
Town Boundaries
Roads
Rail Lines
Streams & Rivers
Lakes & Ponds
Municipal Buildings
Land Use
Residential (Less Than 1/2 Acre Lots)
Residential (More Than 1/2 Acre Lots
Commercial
Industrial
Recreation
Mining
Waste Disposal
Value for Protection
1 - 3 Resources Present
4 - 5
6 - 7
8 - 11
12 - 16
Miles


Ashburnham, MA:
Draft Land Use Suitability and Developable Lands Comparison Map
Wallace Pond
Lake Watatic
Sunset Lake
Lower Naukeag Lake
Upper Naukeag Lake
Lincoln Pond
Ward Pond
Marble Pond
Stodge Meadow Pond
Winnekeag Lake
Lake Wompanoag
Stevens Memorial Library
Police Station
Town Hall
Fire Station
Briggs ES
Oakmont Regional HS
Overlook MS
Legend
Town Boundaries
Roads
Rail Lines
Streams & Rivers
Lakes & Ponds
Municipal Buildings
Developable Lands (From Buildout)
Developed Lands (From Current Land Use)
Value for Protection
1 - 3 Resources Present
4 - 5
6 - 7
8 - 11
12 - 16
** Anything outside of the Developable Lands area is considered to be developed or have some type of absolute development constraint.
0.6 0.3 0 0.6 1.2 Miles
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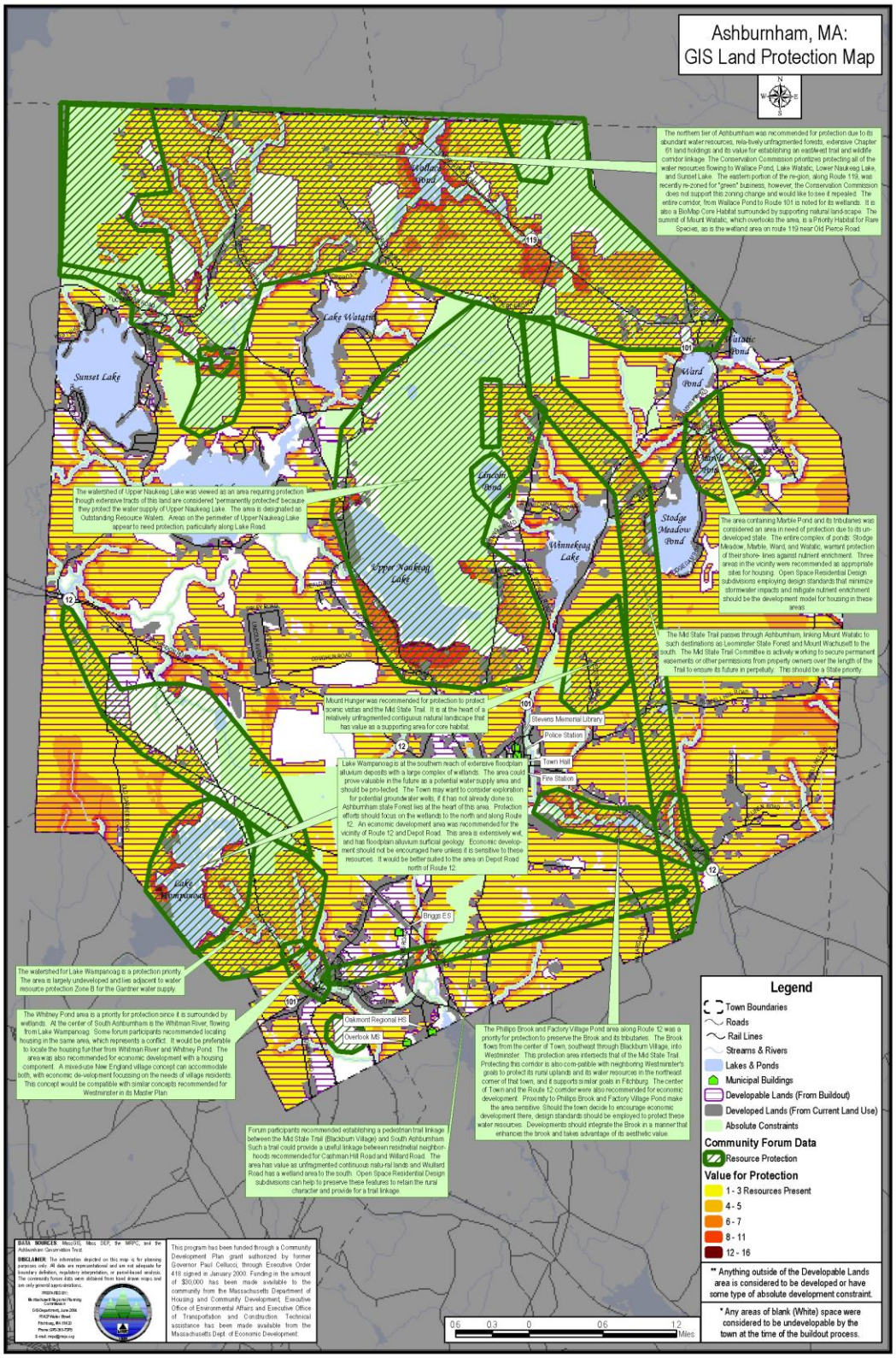
Ashburnham, MA:
GIS Land Protection Map
The northern tier of Ashburnham was recommended for protection due to its abundant water resources, rela-tively unfragmented forests, extensive Chapter 61 land holdings and its value for establishing an east-west trail and wildlife corridor linkage. The Conservation Commission prioritizes protecting all of the water resources flowing to Wallace Pond, Lake Watatic, Lower Naukeag Lake, and Sunset Lake. The eastern portion of the re-gion, along Route 119, was recently re-zoned for "green" business, however, the Conservation Commission does not support this zoning change and would like to see it repealed. The entire corridor, from Wallace Pond to Route 101 is noted for its wetlands. It is also a BioMap Core Habitat surrounded by supporting natural land-scape. The summit of Mount Watatic, which overlooks the area, is a Priority Habitat for Rare Species, as is the wetland area on route 119 near Old Pierce Road.
Wallace Pond
Lake Watatic
Sunset Lake
Watatic Pond
Ward Pond
Marble Pond
Lincoln Pond
Stodge Meadow Pond
Winnekeag Lake
Upper Naukeag Lake
The watershed of Upper Naukeag Lake was viewed as an area requiring protection. Although extensive tracts of this land are considered "permanently protected" because they protect the water supply of Upper Naukeag Lake. The area is designated as Outstanding Resource Waters. Areas on the perimeter of Upper Naukeag Lake appear to need protection, particularly along Lake Road.
The area containing Marble Pond and its tributaries was considered an area in need of protection due to its un-developed state. The entire complex of ponds: Stodge Meadow, Marble, Ward, and Watatic, warrant protection of their shore- lines against nutrient enrichment. Three areas in the vicinity were recommended as appropriate sites for housing. Open Space Residential Design subdivisions employing design standards that minimize stormwater impacts and mitigate nutrient enrichment should be the development model for housing in these areas.
The Mid State Trail passes through Ashburnham, linking Mount Watatic to such destinations as Leominster State Forest and Mount Wachusett to the south. The Mid State Trail Committee is actively working to secure permanent easements or other permissions from property owners over the length of the Trail to ensure its future in perpetuity. This should be a State priority.
Mount Hunger was recommended for protection to protect scenic vistas and the Mid State Trail. It is at the heart of a relatively unfragmented contiguous natural landscape that has value as a supporting area for core habitat.
Stevens Memorial Library
Police Station
Town Hall
Fire Station
Lake Wampanoag is at the southern reach of extensive floodplain alluvium deposits with a large complex of wetlands. The area could prove valuable in the future as a potential water supply area and should be pro-tected. The Town may want to consider exploration for potential groundwater wells, if it has not already done so. Ashburnham state Forest lies at the heart of this area. Protection efforts should focus on the wetlands to the north and along Route 12. An economic development area was recommended for the vicinity of Route 12 and Depot Road. This area is extensively wet, and has floodplain alluvium surficial geology. Economic develop-ment should not be encouraged here unless it is sensitive to these resources. It would be better suited to the area on Depot Road north of Route 12.
Lake Wampanoag
Briggs ES
The watershed for Lake Wampanoag is a protection priority. The area is largely undeveloped and lies adjacent to water resource protection Zone B for the Gardner water supply.
The Whitney Pond area is a priority for protection since it is surrounded by wetlands. At the center of South Ashburnham is the Whitman River, flowing from Lake Wampanoag. Some forum participants recommended locating housing in the same area, which represents a conflict. It would be preferable to locate the housing fur-ther from Whitman River and Whitney Pond. The area was also recommended for economic development with a housing component. A mixed-use New England village concept can accommodate both, with economic de-velopment focussing on the needs of village residents. This concept would be compatible with similar concepts recommended for Westminster in its Master Plan
Oakmont Regional HS
Overlook MS
The Phillips Brook and Factory Village Pond area along Route 12 was a priority for protection to preserve the Brook and its tributaries. The Brook flows from the center of Town, southeast through Blackburn Village, into Westminster. This protection area intersects that of the Mid State Trail. Protecting this corridor is also com-patible with neighboring Westminster's goals to protect its rural uplands and its water resources in the northeast corner of that town, and it supports si-milar goals in Fitchburg. The center of Town and the Route 12 corridor were also recommended for economic development. Proximity to Phillips Brook and Factory Village Pond make the area sensitive. Should the town decide to encourage economic development there, design standards should be employed to protect these water resources. Developments should integrate the Brook in a manner that enhances the brook and takes advantage of its aesthetic value.
Forum participants recommended establishing a pedestrian trail linkage between the Mid State Trail (Blackburn Village) and South Ashburnham. Such a trail could provide a useful linkage between residential neighbor-hoods recommended for Cashman Hill Road and Willard Road. The area has value as unfragmented continuous natu-ral lands and Willard Road has a wetland area to the south. Open Space Residential Design subdivisions can help to preserve these features to retain the rural character and provide for a trail linkage.
Legend
Town Boundaries
Roads
Rail Lines
Streams & Rivers
Lakes & Ponds
Municipal Buildings
Developable Lands (From Buildout)
Developed Lands (From Current Land Use)
Absolute Constraints
Community Forum Data
Resource Protection
Value for Protection
1 - 3 Resources Present
4 - 5
6 - 7
8 - 11
12 - 16
** Anything outside of the Developable Lands area is considered to be developed or have some type of absolute development constraint.
* Any areas of blank (White) space were considered to be undevelopable by the town at the time of the buildout process.
DATA SOURCES: MassGIS, Mass. DEP, the NRPC, and the Ashburnham Conservation Trust.
DISCLAIMER: The information depicted on this map is for planning purposes only. All data are representational and are not adequate for boundary definition, regulatory interpretation, or parcel-based analysis. The community forum data were obtained from hand drawn maps and are only general approximations.
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V. ECONOMIC DEVELOPMENT ELEMENT

A. DEFINING ECONOMIC DEVELOPMENT

The purpose of providing a definition of "economic development" is to attempt to provide the context for which this economic profile has been provided.

According to a 1984 publication of the American Economic Development Council (AEDC), *Economic Development Today: A Report to the Profession*, economic development is a:

- Process of creating wealth through the mobilization of human, financial, capital, physical and natural resources to generate marketable goods and services.

According to the glossary of the Economic Development Contacts Network, economic development is the:

- Process that leads to enterprise expansion, location or startup in a place positioned to accommodate it. It occurs when a job is created and/or when an enterprise takes an action that increases the economic vitality of a community. It is the location-response side of the business-expansion, facilities location, site selection, and new-venture-startup processes.

The Federal Economic Development Administration (EDA) has a more lengthy definition of economic development. According to the EDA:

Economic development is fundamentally about enhancing the factors of productive capacity - land, labor, capital, and technology - of a national, state or local economy. By using its resources and powers to reduce the risks and costs that could prohibit investment, the public sector often has been responsible for setting the stage for employment-generating investment by the private sector.

The public sector generally seeks to increase incomes, the number of jobs, and the productivity of resources in regions, states, counties, cities, towns, and neighborhoods. Its tools and strategies have often been effective in enhancing a community's:

- Labor force (workforce preparation, accessibility, cost).
- Infrastructure (accessibility, capacity, and service of basic utilities, as well as transportation and telecommunications).
- Business and community facilities (access, capacity, and service to business incubators, industrial/technology/science parks, schools/community colleges/universities, sports/tourist facilities).
- Environment (physical, psychological, cultural, and entrepreneurial);
- Economic structure (composition).
- Institutional capacity (leadership, knowledge, skills) to support economic development and growth.

The Commonwealth of Massachusetts, Department of Economic Development (DED) is less defining and more mission-specific.

- The mission of the Massachusetts Department of Economic Development (DED) is to "attract, retain and spread economic prosperity throughout the state".

Regardless of the entity defining economic development, there appear to be common elements among the many definitions. These are:

- Process. There are various government (i.e. permitting & land use planning) and non-government processes (i.e. availability of credit from financial institutions for business expansion) involved providing assistance,

where needed, to the business community to create opportunities for the creation of new ventures, expansion of existing businesses and the relocation of businesses into a community.
- Wealth and Prosperity. The increase in wealth to the resident and prosperity to the community is common.
- Increasing capacity. Increasing capacity of business to generate products and services.

Regardless of how an organization or a person defines economic development most people usually agree to these common traits. This chapter of economic development has been prepared based upon these commonalities.

B. EO 418 ECONOMIC DEVELOPMENT PROCESS

The following section has been offered to enable the reader to form a clear understanding the Economic Development element of the Executive Order 418/Community Development Plan.

Economic development helps sustain the quality of life in our communities by ensuring prosperity and jobs for residents. As our cities and towns become even more integrated into the national and international economies, a planned approach for future economic development helps to ensure the long-term viability of our local economies. Moreover, economic growth is increasingly interrelated with housing in terms of housing preservation and development and open space and resource protection (typically in terms of land use) and transportation improvements (usually in terms of improvements to infrastructure supporting development and preservation efforts).

This Community Development Plan's Economic Development Chapter will identify the location, quantity and type of possible, future commercial and/or industrial developments. Information in this chapter will highlight public input, brief economic history of the community and region and current and potential economic profiles. Using this information, combined with some build out data and land use suitability maps, the following has been provided:

- Needs of the town and resources available to the community to foster business growth
- Economic development goals and objectives
- Implementable strategies for achieving economic development goal

Products that have been included with this narrative include:

- Current and Potential Future Economic Profiles
- Economic Development Goals
- Implementation Strategy
- Economic Development Projects Map

A process of five steps has been followed in order to:

- Fulfill the 418 data collection and analyses requirements
- Assist residents with the creation of achievable goals and implementable objectives

The five steps are:

- Step 1: Develop an economic statistical profile
- Step 2: Establish economic development goals
- Step 3: Assess economic development objectives in relationship to growth suitability maps
- Step 4: Identify and evaluate alternative economic development strategies
- Step 5: Establish an economic development implementation strategy and location map

These five steps have been explained in more detail, below.

1. STEP 1: DEVELOP AN ECONOMIC STATISTICAL PROFILE – FUTURE ECONOMIC PROFILE

- National and State Trends Potentially Affecting the Local Workforce and Business Community
- Availability of Needed Services
- Availability of Housing
- Needs of Local Businesses
- Revenue Generation and Service Demands
- Potential Growth of the Business Community

2. STEP 2: ESTABLISH ECONOMIC DEVELOPMENT GOALS

- Economic Development Goals and Objectives (based upon local input received from local officials and residents at a community forum and subsequent to this meeting, and goals and objectives documented within relevant local and regional plans)

3. STEP 3: ASSESS ECONOMIC DEVELOPMENT OBJECTIVES IN RELATIONSHIP TO GROWTH SUITABILITY MAPS

- Objectives Developed Through Meetings with Residents, Local Officials and Reviews of Relevant Plans.

4. STEP 4: IDENTIFY AND EVALUATE ALTERNATIVE ECONOMIC DEVELOPMENT STRATEGIES

- Multiple Strategies are Identified in Order to Help the Community Achieve the Goals and Objectives Identified in STEP 3.

5. STEP 5: ESTABLISH AN ECONOMIC DEVELOPMENT IMPLEMENTATION STRATEGY AND LOCATION MAP

- Some of the Economic Development Strategies have been illustrated onto an Economic Development Map.

C. LOCAL AND/OR REGIONAL PLANS

Known local and/or regional plans are: Ashburnham Downtown Planning Study, Working Paper No. 1, (IEP, Inc.) (1988); The Ashburnham Master Plan (LandUse, Inc.) (April 1986); Blueprint for Growth: A Master Plan Working Manual (LandUse, Inc.) (April 1986); Downtown Planning Study (IEP, Inc. and TAMS Consultants, Inc.) (June 1989); Greater Gardner Sustainable Growth Management Plan, November 1999; Montachusett Regional Transportation Plan, 2000; and the Montachusett Region Comprehensive Economic Development Strategy, June 2003. Other local and regional plans include: Millers River Hydrologic Assessment; Millers River Watershed Water Quality Assessment; Assessment of Non-point Source Pollution for the Millers River Watershed; Nashua River Watershed Growth Plan, 1998; and, Nashua River Watershed Water Quality Assessment. These plans were not reviewed for the purpose of this Community Development Plan. However, should the community plan for and develop commercial or industrial uses on a large scale, these plans should be reviewed so that the watershed and water sources are adequately protected. These plans have been reviewed for their relevance to this Community Development Plan. Should the community plan for and develop commercial or industrial uses on a large scale, all known plans should be reviewed so that development may occur while balancing the protection of natural resources.

The following section contains both excerpts from local and regional planning documents followed by MRPC's observations and recommendations for the community. Selected portions of local and regional plans have been enumerated and appear prior to all relevant observations following each excerpt.

1. Ashburnham Downtown Planning Study, Working Paper No. 1

A summary of the key economic planning and development issues and objectives raised within the Ashburnham Downtown Planning Study, Working Paper No. 1 is as follows:

- Establish village commercial zoning district through adoption of zoning amendment
- Establish Village Office Zoning District
- Establish Commercial-Industrial Zoning District
- Revise Sign Regulations
- Revise Site Plan Review Process
- Continue with town common plan for Winchester Park
- Retain Highway Department site for town plaza and municipal parking
- Continue progress toward establishment of downtown historic district

2. The Ashburnham Master Plan

A summary of the key economic planning and development issues and objectives raised within The Ashburnham Master Plan is as follows:

- Encourage appropriate light industry to move to or expand within Ashburnham
- Work to create more local jobs
- Work to broaden the town's tax base
- Plan for more efficient land use in the downtown
- Encourage the local economy to serve more of the needs of Ashburnham residents
- Protect the architectural and historical character of the downtown as a basis for guarding its long term viability
- Encourage a healthy business economy in South Ashburnham
- Work with local employers to ensure that existing jobs remain in the town

3. Blueprint for Growth: A Master Plan Working Manual

A summary of the key economic planning and development issues and objectives raised within the Blueprint for Growth: A Master Plan Working Manual is as follows:

- Reduce the minimum lot size for commercial uses from 25,000 to 12,000 square feet
- Use downtown fire station and DPW lots for commercial development
- The IDC and the Board of Selectmen meet with local businesspeople in order to identify ways to encourage more business activity in Ashburnham
- Rezone land from residential to industrial
- Concentrate commercial uses in the town centers and do not rezone more land for commercial use
- More specificity ion the home occupations and professional; offices zoning bylaw is needed
- Adopt site plan review amendment establishing a criteria for commercial and industrial development
- Appropriate funds to the Planning Board for the preparation of a formal downtown plan and that an important component of that plan be provisions for commercial development in Ashburnham Center

4. 2003 Montachusett Region Comprehensive Economic Development Strategy

Relevant excerpts from the MRCEDS include:

- Ashburnham officials have expressed the desire to encourage the development of commercial and industrial enterprises especially in the town center and along State Route 101/Gardner Road, near the Ashburnham-Gardner municipal boundary.
    - We recommend that the town use all available economic development tools as needed to facilitate the development of the industrial zoned land on State Route 101. Some of these may include the Economic Development Incentive Program (EDIP) allowing the community to encourage development through the use of tax incentives and for possible infrastructure financing, use of the Ashburnham Focus Committee for marketing and the development of an Industrial Development

Commission (IDC) to market the community and possibly accessing state and/or federal grant funds for related infrastructure improvements (for publicly-owned and managed projects).

- Fostering the development of small-scale and home-based businesses.
  - The promotion of home-based businesses should be implemented with great care so as to not detract from the quality of any existing or to-be-developed, neighborhood. This Economic Development Chapter will offer models bylaws for adoption at town meeting promoting commercial and industrial development as well as home-based businesses.
- Many of Ashburnham's residents in the labor force commute out of town for their jobs. Improving the transportation network should ease commuting difficulties and make the system safer for use.
  - The community should continually improve the local transportation infrastructure to ease commuting and make the system safer for use.
- First, the use of the words "industrial" and "manufacturing" may not specifically apply to the Town of Ashburnham for all applications. The words "business" or "commerce" or "commercial" may be substituted as needed. However, all other information in these Objectives should be relevant. Objective 1, be advised that MassDevelopment and the North Central Massachusetts Development Corporation provide "non-traditional" financing to businesses.
  - Inquiries received by local officials concerning financing should be referred to these and other financial institutions.
- Objective 4, the fact that Ashburnham is participating in the EO 418/Community Development Plan Program is a testament to the desire that local officials wish to complete a plan with implementable action steps fostering business development and job growth.
  - The recommended goals noted here and at the end of this chapter are implementable, reasonable and should be acted upon as soon as possible.
- Objective 8, addresses the need for agencies such as the MRPC to provide technical assistance to local officials, as needed, to promote the development of commerce in the community. Technical assistance with commercial and industrial planning and development is available from agencies such as the MRPC, MassDevelopment, Massachusetts Office of Business Development, community development corporations and chambers of commerce (the last four typically deal more with private enterprises than public).
  - Local officials are encouraged to access technical assistance from public and private resources as needed by the town.
- Objective 10, identifies "business retention" as a key ingredient to be used to foster job retention and business growth. While chambers of commerce typically engage in "visiting ambassador" programs to learn about the needs of local businesses thus encouraging stability, it is not uncommon for public officials to also implement visitation programs to existing businesses promoting retention of same. Concerning marketing a region to encourage business retention and expansion, this task is typically implemented by chambers of commerce and tourism organizations. Notable among these is the Greater Gardner Chamber of Commerce, Greater Worcester Tourism Council and the Johnny Appleseed Trail Association, Inc.
  - Local officials are encouraged to contact the above-named business advocacy and tourism organizations in an attempt to collaborate on business retention with these existing groups and/or create a local business visitation program including several key members of the local government (ex. representatives from the Board of Selectmen and Planning Board).
- Objective 13 deals with economic incentives (tax incentives) that can be offered to businesses that expand making a capital investment and create at least one new job in the community (not transferring a job from another location in Massachusetts), through the Massachusetts Economic Development Incentive Program (EDIP), explained in greater detail later in this Chapter.
  - Local officials should be aware of the benefits of this program, both to the community and local businesses, before making a determination as to its need and usefulness to the town.
- Concerning Objective 18, in 2004 the MRPC will be collecting information concerning mapping the high-speed data transmission system in the Region. Local information to be requested from local officials and residents will be critically important to creating a product that will be useful to enterprises who need high data transmission as a component for business growth. Lastly, any "streamlining" of local permitting processes for businesses will aid local officials with the review process and better educate businesses about expectations of them from local officials.

  - We recommend that town officials participate in the map creation process to help the MRPC construct the most effective GIS map possible.
- Objectives 4. and 5., deal with the provision of daycare to working parents. Municipalities may be able to assist residents with this issue utilizing Community Development Block Grant (CDBG) funds that can be obtained from the Massachusetts Department of Housing and Community Development.
  - We recommend further study of this issue to calculate the need of local businesses and workers prior to initiating obtaining funds for such a program.
- Observation: Goal 9, Objective 1. Some funds are available from federal and state agencies for certain revitalization efforts.
  - Local officials may contact MRPC staff to learn about what funding sources may and may not be available for local projects, as needed.
- Objective 4. Technical assistance and funding are available from the Massachusetts Historic Commission and National Trust for Historic Preservation, respectively. Local officials on the Historic Commission, as well as others, may have experience obtaining either funding or technical assistance. MRPC has experience obtaining historic preservation funds for Athol with improvements to a former meetinghouse and in Templeton with emergency stabilization and preservation planning to two historic burial grounds.
  - Local officials are encouraged to contact local, regional and state agencies and organizations to prepare the necessary plans and make improvements to safeguard local historical assets.
- Objective 5. Local assets in commercial and village districts should be examined for use to foster entrepreneurial activities.
  - Further analysis of developable parcels and possible, future reuse of municipal buildings or town-owned land, should be analyzed as potential areas of commercial development.
- Objectives 6, 8, 9, 11, 12 and 13 deal with the promotion and marketing of business districts in the community, the community itself and region, and collaboration among the public and private sectors. While there are no known grant-funding sources for marketing and promotions, a number of successful marketing and promotional efforts can be accomplished through partnerships among municipalities, business associations, chambers of commerce and visitors associations. Municipal officials are encouraged to contact the appropriate group when planning to implement marketing or promotional efforts.
  - While there are no known grant-funding sources for marketing and promotions, a number of successful marketing and promotional efforts can be accomplished through partnerships among municipalities, business associations, chambers of commerce and visitors associations. Municipal officials are encouraged to contact the appropriate group when planning to implement marketing or promotional efforts. Examples of some of the possible appropriate groups includes, but is not limited to the: North Quabbin Chamber of Commerce; Johnny Appleseed Trail Visitor Association, Inc.; and, representatives of businesses within the community.

5. <u>1999 Greater Gardner Sustainable Growth Management Plan</u>

Relevant excerpts from the GGSGMP include:

- Ashburnham may wish to implement a scenic roadways bylaw that regulates the design of new roadside development both within and outside the road right-of-way. Scenic roadways bylaws can significantly improve the look and feel of ANR (Approval Not Required) development, with little or no burden to landowners or developers.
- The town should consider adopting and effective cluster zoning bylaw now, so that new subdivisions are designed to protect open space.
- Using the environmental constraints and opportunities maps provided by this (Greater Gardner Sustainable Growth Management Plan) project, town leaders should identify suitable locations for new industrial development.
- The town should consider establishing or expanding one or more village center areas to encourage compact growth patterns and a mix of residential and commercial uses that stabilizes or improves town finances.

Observations about the community in relation to both goals from the above-stated plan and the community:

- The adoption of "scenic roadways" and "cluster zoning" bylaws would enhance the quality of the community making it a more desirable place to live and work, and might foster eco-tourism through the preservation of open spaces.
- The identification of suitable locations for new industrial development appears to have been completed by local plans and reinforced with this Community Development Plan (see Economic Development Map).
- Redeveloping land within the Town Center appears to have been documented as a need by a local plan and charrette and planning and development projects and being planned by the Downtown Committee.

6. Greater Gardner 2000 Economic Development Strategy

Relevant excerpts from the GGSGMP include:

- The Region's economic development strategies and actions will vary community by community in order to match the communities' varied characteristics and resources. Business development efforts in the smaller communities will be respectful of and consistent with the small town environment that is one of the Region's major attractions. A mutually supportive economic pattern for the Region is anticipated to feature concentrations of larger scale business development in Gardner and at a few other key points along major highways, with smaller scale businesses scattered in the outlying, smaller communities.
- The educational level of the (Greater Gardner) Region's population is relatively low by state standards, with a high proportion of high school dropouts and workers with vocational training.
- Many of the less educated residents are dependent on employment in traditional manufacturing industries, viz., furniture making, metals fabrication, industrial machining, and plastics.
- Employment in these sectors is forecast to continue to move to locations where operating costs are lower.
- The greatest long term need is the assurance of a quality labor force in the future. Strategies to address this issue must have a dual approach that includes: (1) quality education and training, with transition from school to work, and (2) recognizing and dealing with the cluster of issues that threaten to engulf people who are struggling to enter or to stay in the labor force. Training and education must be linked with a place to live, transport to work, child care, dealing with abuse – the full range of twenty-first Century stresses.

Observations about the community in relation to both goals from the above-stated plan and the community:

- While creating a Community Development Plan for this community, it appears that the local officials and residents wish to promote the growth of small businesses and "home-based" businesses and small commercial operations in existing villages and sometimes along major state-numbered routes. More specific to Ashburnham, commercial and industrial development appears to be desired in the Town Center, South Ashburnham and on the Ashburnham-Gardner municipal boundary on State Route 101. This commercial and industrial development philosophy appears to be consistent with local plans, the Greater Gardner 2000 Economic Development Strategy and information gathered from local officials and residents during the creation of Ashburnham's Community Development Plan.

7. Open Space and Recreation Planning

Ashburnham completed its most recent Open Space and Recreation Plan in 2001. Relevant excerpts from the OSRP include:

- A serious review of our Zoning Bylaws is needed.
- Ashburnham has only 3% of its land mass devoted to business and industrial development. While it is important to protect open space and manage growth, this is not enough to provide for a diversified tax base to support the ever-growing demand on the Town's financial resources. It has often been suggested that a large portion of the land currently set aside for industrial development is not suitable for this purpose. This should be carefully analyzed and the need for commercial and residential growth should be balanced with the need to protect open space.

- Additional land conservation bylaws should be considered to encourage compact residential growth and reduce sprawl.
- A Scenic Roads by-law should be put in place in order to protect our scenic vistas.

Ashburnham is encouraged to pursue the following goals and objectives:

- Goal: Use this Community Development Plan as a springboard to focus and encourage local debate and possible re-zoning of land for commercial and industrial uses. Some areas for consideration for re-zoning include South Ashburnham and Gardner Road/Center Street and.
  - Implement and encourage development of commercial enterprises in the new "Green Business" zone in northeast Ashburnham proposed at the May 2004 Annual Town Meeting.
  - Acquire land adjacent to one or more lakes fostering public use (ex. boating and angling) and eco-tourism.
  - Develop a management plan for public lands (ex. town forest) identifying needs for the developing signage of trails, maintenance for parks and funding.
  - Inventory all historic sites and apply for State and National Historic Sites designation. Upon approval of the applications install signage identifying historic sites and districts promoting historic tourism in the community. The local historic commission should be consulted.
  - Improve the Scenic Roads bylaw mitigating negative impacts of ANR development.
  - Implement other recommendations in the Open Space and Recreation Plan such as establishing an Open Space bylaw and a Sign and Façade bylaw to reduce the negative impact of sprawl and to protect the historical character of the Business District, respectively.
  - At the parcel level, identify potential and existing uses of the Business District (Town Center). All future uses (ex. residential, commercial, industrial and opens pace and recreation) should be analyzed to foster the retention of service and retail establishments, provide for safe and convenient access while allowing for an appropriate amount of public spaces complementing business, residential and government uses.
  - Re-examine the strengths and weaknesses in the Town Center allowing for and encouraging the mix of uses typically found in typical New England town centers.
  - The Town Center Committee has been proactively working toward the objective of relocating the Town DPW facility with an eye toward redeveloping this parcel for residential, commercial, or mixed use. This should continue until redevelopment occurs.
  - The Board of Selectmen or some other appropriate local body (ex. Town Center Committee or Planning Board) should identify all local brownfields. Local debate encouraging the development of reuse plans is encouraged in order to facilitate the reuse of idle or abandoned sites to foster possible commercial or industrial development.
  - If the community wishes to actively guide commercial and industrial development while balancing the preservation of open space and recreation amenities, the town should create a redevelopment authority at town meeting (or an economic development and industrial corporation through home rule legislation). Such an entity would have the legal authority to conduct land development and redevelopment and related marketing activities. Such an entity should work closely with other boards and commissions (ex. Select Board, Open Space and Recreation Committee, Planning Board and Conservation Commission) to re-zone, develop and market land appropriate for commercial and industrial activities while preserving open spaces.

D. CURRENT ECONOMIC PROFILE

The following current economic profile includes relevant socioeconomic data accompanied by brief analyses concerning the local workforce and commercial and industrial enterprises in the Town of Ashburnham.

E. COMMUNITY LOCATION

The Town of Ashburnham is:

- One of 22 cities and towns in the Montachusett Region
- One of 351 cities and towns in the Commonwealth of Massachusetts

Ashburnham is approximately:

- 9 miles northwest of Fitchburg
- 55 miles northwest of Boston
- 31 miles north of Worcester
- 200 miles north of New York City

Many later comparisons of data will be made between the community, Montachusett Region, State and in some cases the Nation. These comparisons are intended to illustrate the socioeconomic condition of the community against the State and Nation.

The Montachusett Region comprises an area of 675 square miles located in north central Massachusetts. It is bordered by New Hampshire to the north, metropolitan Worcester to the south, the former Franklin County to the west and metro Boston to the east. The 22 towns and cities that comprise the Montachusett Region lie in the former northern Worcester and western Middlesex counties (county governments and related political boundaries are slowly being dissolved in some parts of the Commonwealth of Massachusetts).

While the region is mostly rural, well-defined industrial centers are present in Athol, Ayer, Clinton, Fitchburg, Gardner and Leominster. Leominster, Fitchburg and Gardner are the Region's most populous communities, and are the only cities in the Montachusett Region. The largest concentration of businesses and workers can be found in these three cities in this tri-cities metropolitan region.

1. Local History – Town of Ashburnham

Local History

The Town of Ashburnham was granted in 1736 as bounty to the heirs of officers and soldiers from Dorchester who served in the expedition to Canada in 1690. Prior to this grant, however, individuals had received land within the Town's bounds for service to the province: the Starr Grant, awarded for service against the Pequot Indians in 1650, was granted to heirs in 1735; the Cambridge Grant and the Lexington Grant of 1,000 acres each, for maintaining a bridge over the Charles River, were granted in 1734; the Bluefield Grant of 450 acres for maintaining a tavern on the road from Lunenburg to Northfield was granted in the northwest corner of Town; the Converse Grant of 400 acres granted in 1735 to heirs of major James Converse for services rendered to the Colony; and the Rolfe Grant of 600 acres to heirs of a slain Haverhill minister. When the Town was laid out, this acreage was added to the 36 square miles and was sold to individuals independently of the proprietary lands. The Dorchester-Canada Grant was divided among 60 heirs of the soldiers. The initial land division was for lots of 50 acres: 60 for proprietors, one for the minister, one for the support of the ministry and one for the schools. They were laid out on the south, east and west shores of Upper Naukeag Lake, south through the center, east to the individual grants at the Fitchburg-Westminster line and west to South Ashburnham. After the five distributions, "there remained only twenty small tracts of land…including five islands in Upper Naukeag", that were auctioned off in 1781. The Town of Ashburnham was incorporated in 1765 from the Dorchester-Canada Grant and the earlier grants. In 1767, part of its territory was included in the new Town of Ashby. Another section was joined with the new Town of Gardner in 1792. The Town of Ashby annexed additional territory from Ashburnham in 1792. Portions of the Towns of Gardner and Westminster were annexed to Ashburnham in 1815 and 1824 respectively.

The first Ashburnham Colonial settlement probably occurred in the Bluefield Tavern area on the Northfield Road around 1734. The Northfield Road, constructed in 1733, was the "brainchild of a group of land speculators, mostly from Lunenburg, headed by Josiah Willard." It was created to cross through Ashburnham "to get to the lush lands of the Connecticut River Valley." Native seasonal sites were probable at Upper and Lower Naukeag Lakes and at several other of the six sizable ponds. Mill locations between the Naukeag Lakes and the hilltop Meetinghouse site,

south of Upper Naukeag, were both established by 1738. The first Meetinghouse was erected in 1739. Native hostilities led to the abandonment of the settlement in 1744, with permanent resettlement by 1757.

In 2001, Ashburnham is proud to have such architectural gems as the Historical Society building (1835), the Community Church (1836), Stevens Library (1890), the Fairbanks Memorial Town Hall (1904) and the Dolly Whitney Adams School (1905). Winchester Park is a source of pride. Also of note, Cushing Academy was founded in 1865 at the bequest of Thomas Parkman Cushing, its main building was erected in 1875; the building of a second structure followed a fire in 1893.

Agricultural landscapes remain with eighteenth and early nineteenth century dwellings, most notably on Russell Hill Road in the east. Other significant rural house clusters survive at Lane Village, west of Upper Naukeag Lake and on Tuckerman Road in the northwest. Ashburnham's Center retains many of its nineteenth century structures including a partial chair factory complex with worker housing and a variety of modest residential, commercial and civic structures. Principally, fire was the greatest element affecting local industry, because it was responsible for the demise of local manufacturing.

Early nineteenth century worker housing survives along Fitchburg Road at Blackburn Village as well as the Foss and Lester White's houses in Factory Village. Better examples of worker housing in the Center are on Puffer and Central Streets, but these came later. In South Ashburnham, concentrations of nineteenth century worker housing exist, but little remains of the industrial complexes.

As in the turn-of-the-century, recreational homes continue to attract people to the Town. In the last two decades, the Town has seen an accelerated rate of growth in terms of new housing and year-round population. This growth was centered on the lakes until very recently, but current development continues around pond sites, including multi-unit subdivisions. Ultimately, exurbia highland development threatens the remaining rural landscapes.

Town of Ashburnham, Open Space and Recreation Plan, 2001.

2. Regional History

The Montachusett Region is a collection of twenty-two communities located in northern Worcester County and western Middlesex County. This regional history is offered so that the reader has a greater understanding of the region surrounding the Town of Ashburnham.

The Montachusett Region's earliest settlements were founded as trading outposts for the Massachusetts Bay Colony. Lancaster and Groton were settled in the mid-1600's to ensure the flow of animal pelts from the interior to Boston. By the second half of the eighteenth century, most communities in the region were settled. Originally, local economies focused on agriculture but, since farming provided a poor return, manufacturing quickly became the dominant economic force in the region.
Montachusett communities harnessed swift-flowing streams and rivers for water-powered manufacturing. The first mills were allied with agricultural production, but the nineteenth century saw the establishment of other industries, including paper, textile and woodworking industries. By the mid-nineteenth century, the production of lumber and wood products became the region's largest industry. For example, the City of Gardner was known internationally as a major center of chair manufacturing.

The growth of the region was accelerated by railroad connections enabling the easy transport of raw materials, finished goods and people. Communities with an industrial base prospered and expanded with the influx of foreign-born and US-born migrants. Smaller towns, such as Ashby and Hubbardston, did not see widespread growth. However, their industrialized neighbors enjoyed their heyday during the late Victorian era.

The 20th Century saw a period of economic decline that was caused by the migration of industries to southern states and exacerbated by the Great Depression. The smaller industrialized communities suffered most severely and revived most slowly. Today, the region's more urbanized communities are dominated by a mix of more "mature" manufacturing industries such as paper, wood and metals products with polymers, plastics, food processing and biotechnology companies supported by related service and retail industries forming a true cluster as defined by the Federal Department of Commerce, Economic Development Administration (EDA). Fitchburg, Gardner and Leomin-

ster's surviving paper, furniture and plastics companies are dispersed among the emerging technology firms mentioned above.

Local economies, recognizing the instability of the region's industrial base, are currently undergoing the transition away from specialization in manufacturing industries (Montachusett Regional Planning Commission, 1990). A foray into tourism in order to diversify the economy has proven successful with the creation of the Johnny Appleseed theme marketing and creation of the Johnny Appleseed Trail Visitors Center in Lancaster. This attempt at diversification has thus far proven to be successful providing additional jobs in the Region, adding entry-level jobs for may new workers and lessening the Region's dependence upon the manufacturing sector. A clear shift in jobs has occurred away from the manufacturing sector and into the service sector. While both high and low-paying service sector jobs are being created, it is likely that many of the new jobs created in the growing service sector are creating positions with lower wages than the jobs disappearing in the manufacturing sector.

3. Assessment of Local Businesses

The assessment of the local business community has been based upon an identification of the number of businesses in the community and their classification according to the Standard Industrial Classification (SIC) system.

a) Location of Businesses & Number of Businesses & Classification of Businesses by SIC (Standard Industrial Classification)

In the Community …

There are 165 businesses in Ashburnham. Businesses with the highest number and concentration in the Town of Ashburnham include Services (28.5%), Construction (17%), Retail Trade (12.7%) Public Administration (6.7%) and Agriculture, Forestry and Fishing (6.1%). Notably, Ashburnham has a:

Higher concentration of establishments in Construction (17.0%) than compared with the Montachusett Region (10.5%)
Lower concentration of establishments in Manufacturing (5.5%) than compared with the Montachusett Region (6.1%)
Lower concentration of establishments in Retail Trade (12.7%) than compared with the Montachusett Region (16.3%)
Lower concentration of establishments in Services (28.5%) than compared with the Montachusett Region (31.3%)

Establishments by SIC

	NUMBER OF ESTABLISHMENTS	PERCENTAGE OF ESTABLISHMENTS
Agriculture, Forestry & Fishing	10	6.1%
Mining	0	0.0%
Construction	28	17.0%
Manufacturing	9	5.5%
Transportation & Utilities	5	3.0%
Wholesale Trade	7	4.2%
Retail Trade	21	12.7%
Restaurants, Etc.	6	3.6%
Finance, Insurance & Real Estate	6	3.6%
Services	47	28.5%
Public Administration	11	6.7%
Health Services	8	4.8%
Education	7	4.2%
Grand Total	165	100.0%

Source: Info-USA & the Massachusetts Executive Office of Environmental Affairs

In the Montachusett Region …

Businesses with the highest number and concentration in the Montachusett Region include Services (31.3%), Retail Trade (16.3%), Construction (10.5%), Finance, Insurance and Real Estate (6.3%) and Manufacturing (6.1%).

Establishments by SIC

	NUMBER OF ESTABLISH-MENTS	PERCENTAGE OF ESTAB-LISHMENTS
Agr, Forest, & Fishing	221	2.7%
Mining	6	0.1%
Construction	860	10.5%
Manufacturing	502	6.1%
Transportation & Utilities	247	3.0%
Wholesale Trade	403	4.9%
Retail Trade	1,332	16.3%
Restaurants, Etc.	392	4.8%
Finance, Ins. & Real Est.	515	6.3%
Services	2,567	31.3%
Public Admin.	471	5.7%
Health Services	467	5.7%
Education	213	2.6%
Grand Total	8,196	100.0%

Source: Info-USA & the Massachusetts Executive Office of Environmental Affairs

Further analysis of the number and types of establishments in the community and the region should be completed upon the completion of the Community Development Plan process. While this Community Development Plan relies on one source of data, multiple sources are available. A significant, future amount of resources should be allocated to cross-reference all sources (ex. Lists of Business Certificates from Local Town Clerk, Phone Books, Harris Directory and the Thomas Register) to improve the quality of data available to local and regional officials.

b) Recent Business Trends in Growth or Declines

The majority of commercial and industrial buildings in the community are occupied. The period of time that a sometimes-vacant, commercial or industrial property in the community remains vacant appears to be relatively short in most cases. Some points of interest in Ashburnham concerning future growth are as follows:

- The Downtown Focus Committee, now emerging the Ashburnham Focus Committee, has been working diligently and proactively toward planning for and encouraging the growth of appropriate uses in the center of the community. The Committee's proposed relocation of the Town Department of Public Works site freeing this space for appropriate development in the center of town is proactive and worthy of implementation as soon as possible.
- The fairly quick reuse of vacant commercial and industrial sites is a testament to the need for businesses to use most of the space available, need for certain commercial activities (ex. retail and food service) in town.

There are some properties that have not been slated for development in the near term. This does not mean that the community is "in decline". On the contrary, some projects take more planning and need more "lead time" to facilitate development than others. Some of the few examples in Ashburnham are as follows:

- While not technically in "decline", the lack of use of land zoned for industry appears to be inhibited by the topography (ex. degree of slope) and existence of wetlands. Ashburnham should reconsider its location of commercial and/or industrial zones to accommodate such growth in areas of the community with as few development constraints as possible.

- A "Phase One Site Assessment" and demolition of the buildings have been completed at the former "Coauette Catering" site at 150 Center Street. Once the ownership of this site has been resolved, redevelopment can occur.

4. Local Workforce and Demographic Information

This section includes current workforce characteristics including population, working age population, age, gender and race. Three income data sets of local residents (median household income, median family income and per capita income) have been included. A comparison of growth in income with the consumer price index ("cost of living") for the closest metropolitan region has also been provided. Finally, data about the poverty rate, labor force, unemployment rate, education, per pupil expenditures and workforce development programs has also been provided.

a) Current Workforce Characteristics

(1) Population

In the Community …

The population grew 2.1% from 5,433 in 1990 to 5,546 in 2000, slightly ahead of the Montachusett Region's growth rate for the same period. Between 1990 and 2000, Ashburnham's population growth rate of 2.1% exceeds the Montachusett Region's rate of 1.8% by 1.167 times.

In the Montachusett Region …

This region grew at a rate of 1.8% from 1990 to 2000. For full statistics on Montachusett Region see Demographic Section.

(2) Working Age Population

In the Community …

The percentage of working age population grew by 10.2% during the last twenty years: 65.4% in 1980 to 66.6% in 1990 to 75.6% in 2000. Between 1990 and 2000, Ashburnham's working age population growth rate of 10.2% exceeds the Montachusett Region's rate of 66.1% by 0.154 times.

In the Montachusett Region …

The number of residents of working age in the region shrank 2.7% from 1980 to 2000: 68.8% in 1980 to 65.6% in 1990 to 66.1% in 2000. For full statistics on Montachusett Region see Demographic Section.

(3) Age

In the Community …

On average, Ashburnham's population has aged consistent with the region, state and nation. In Ashburnham, between 1980 and 1990, the median age increased from 30.4 to 32.9 (8.2%) and the age increased again between 1990 and 2000 from 32.9 to 37.3 (13.4%). In 2000, the median age in Ashburnham (37.3) was only slightly less than that in the Montachusett Region (37.4) and slightly more than the State (36.5). In 2000, the average age of local residents was 37.3, less than the regional average of 37.4.

In the Montachusett Region …

The average median age of Montachusett residents in 2000 was 37.4 years, slightly over the state median age of 36.5. This decade, the Region's average age surpassed the state's median age by 0.9 years. The region's population

appears to be aging more rapidly than the statewide population. This result could also have occurred due to the loss of those at the lower end of the age spectrum. As a result, the region's median age inched closer to the state's median age. Median ages within Montachusett towns range from a low of 34.1 years in Fitchburg to a high of 43.2 years in Petersham. For full statistics on Montachusett Region see Demographic Section.

(4) Gender

In the Community …

In 2000, there are 2,817 (50.8%) males and 2,729 (49.2%) females in Ashburnham. There is a higher concentration of males in Ashburnham (50.8%) versus the region (49.7%) and a smaller percentage of females in the community (49.2%) than in the region (50.3%).

In the Montachusett Region …

According to the 2000 census, the region's population is divided approximately evenly between males and females. There are 114,724 (50.3%) females in the region and 113,281 males (49.7%). There are slightly more females overall, with this gender disparity most concentrated in the urbanized areas of (Fitchburg, Leominster, Clinton and Athol). For full statistics on Montachusett Region see Demographic Section.

(5) Race

In the Community …

Caucasians (whites) were the predominant race in Ashburnham in 2000 (at 5,416 persons; 97.7% of the local population) while all minorities comprised 130 persons, (2.3% of the local population). The percentage of whites in Ashburnham (97.7%) is higher than the regional average (91.1%).

In the Montachusett Region …

In keeping with national trends, the Montachusett population is becoming more diverse in its racial and ethnic makeup. In 1980, whites constituted 96.3% of the population but declined to 93.5% by 1990 compared with 91.1% in 2000. Minority racial and ethnic groups continue to be one of the fastest growing population segments in the region. For full statistics on Montachusett Region see Demographic Section.

Income Characteristics

(6) Median Household Income

In the Community …

Ashburnham's median household income (MHI) rose 30.9% from $45,442 to $55,568 from 1990 to 2000. The community's MHI was higher than the regional average ($54,629), state average ($50,502) and nation's average MHI ($41,994). For full statistics on Montachusett Region see Demographic Section.

Median Household Income

Community	Median Household Income 1990	Median Household Income 2000	% Change
Ashburnham	**$45,442**	**$55,568**	**30.9%**
Region Average	$38,901	$54,629	40.4%
Massachusetts	$36,952	$50,502	36.7%
US	$30,056	$41,994	39.7%

Source: U.S. Department of Commerce, Bureau of the Census 1990 and 2000

In the Montachusett Region …

Region-wide the median household income rose 40.4% from $38,901 in 1990 to $54,629 in 2000. In 2000, Communities like Harvard, Groton and Sterling have MHIs higher than the regional average while the MHIs in Athol, Fitchburg and Gardner have the lowest MHIs in the Region.

In 1990, median household income in the Montachusett Region averaged $38,901, slightly above the statewide median household income of $36,952. The region's 1990 median household income represents a 148% increase from the 1980 regional level of $15,700. The comparable statewide median for 1980 was $21,329. For full statistics on Montachusett Region see Demographic Section.

(7) Median Family Income

In the Community …

Ashburnham's median family income (MFI) rose 30% from $45,359 to $58,993 from 1990 to 2000. The community's MFI was less than the regional MFI average ($62,297), less than the state's MFI ($61,664) and higher than the nation's MFI ($50,046). For full statistics on Montachusett Region see Demographic Section.

Median Family Income

Community	Median Family Income, 1990	Median Family Income 2000	% Change
Ashburnham	**$45,359**	**$58,993**	**30%**
Region Average	$43,576	$62,297	43%
Massachusetts	$44,367	$61,664	39%
US	$35,225	$50,046	42%

Sources: U.S. Department of Commerce, Bureau of the Census 1990 and 2000

In the Montachusett Region …

Region-wide the median family income rose 43% from $43,576 in 1990 to $62,297 in 2000. In 2000, Communities like Harvard, Groton and Sterling have MFIs higher than the regional average while the MFIs in Athol, Fitchburg and Gardner have the lowest MFIs in the Region. In 1990, median family income in the Montachusett Region averaged $43,576, slightly below the statewide median family income of $44,367. The region's 1990 median family income represents a 148% increase from the 1980 regional level of $15,700. The comparable statewide median for 1980 was $21,329.

Comparison of the state and regional median family incomes over the 1980s shows Montachusett making significant gains, ending the decade nearly even with the state median. The overall increase in income, however, masks significant variations within towns and cities in the region. Within the region, the contrast between urban areas and wealthier, small towns ranged from a high of $60,000 in Groton, to a low of $32,939 in Ayer. Fitchburg ($33,357) and Athol ($33,263) also showed relatively low median family income levels, although other urban centers such as Leominster ($41,927) and Clinton ($40,139) compared favorably with the suburban towns. For full statistics on Montachusett Region see Demographic Section.

(8) Per Capita Income

In the Community …

PCI rose from $15,595 in 1990 to $21,659 in 2000. Ashburnham's per capita income (PCI) increased by almost 40% from 1990 to 2000, higher than the regional average increase of 31.5%. For full statistics on Montachusett Region see Demographic Section.

Per Capita Income

Community	Per Capita Income, 1990	Per Capita Income, 2000	% Change
Ashburnham	**$15,595**	**$21,659**	**38.9%**
Region Average	$15,501	$23,262	50.1%
Massachusetts	$17,224	$25,925	50.5%
US	$14,420	$21,587	49.7%

Sources: U.S. Department of Commerce, Bureau of the Census 1990 and 2000

In the Montachusett Region …

In 2000, region-wide the per capita income (CPI) rose 50.1% from $15,501 in 1990 to $23,262 in 2000. In 2000, communities like Harvard, Groton and Sterling have CPIs higher than the regional average while the CPIs in Athol, Fitchburg and Royalston have the lowest CPIs in the Region.

In 1990, average per capita income for the Montachusett Region was $15,526. This ranks the region above the national per capita income of $13,546, but below the statewide average of $17,070. Within the region, per capita income in 1990 ranged from a high of $22,832 in Groton to a low of $12,140 in Fitchburg, the most populous community in the region. Again, Leominster ($15,960) and Clinton ($15,328) showed higher per capita income levels than other urban areas, indicating healthier local economies.

(9) Consumer Price Index

In the Boston-Brockton-Nashua-Worcester-Lawrence area, the "cost of living" (also known as the Consumer Price Index) rose 32.2% from 1990 to 2000.

Consumer Price Index

YEAR	ANNUAL CPI % INCREASE
1990	5.8%
1991	4.4%
1992	2.5%
1993	2.9%
1994	1.3%
1995	2.4%
1996	3.0%
1997	2.8%
1998	2.3%
1999	2.5%
2000	4.3%

Ten Year CPI% Increase -32.2%

Source: U.S. Bureau of Labor Statistics

In Ashburnham, Median Household Income and Median Family Income rose at a slower rate then the CPI while Per Capita Income outpaced the CPI between 1990 and 2000. For full statistics on Montachusett Region see Demographic Section.

Comparison of Incomes

	1990	2000	% INCREASE
Median Household Income	$42,442	$55,568	30.9%
Median Family Income	$45,359	$58,993	30.1%
Per Capita Income	$15,595	$21,659	38.9%
"Cost of Living" (Consumer Price Index)	(Not applicable)	(Not applicable)	32.2%

Sources: U.S. Census for 1990 and 2000 and U.S. Bureau of Labor Statistics

(10) Poverty Rate

In the Community …

Ashburnham's poverty rate increased to 6.4% from 6.2% between 1990 and 2000. There are 18 more people living in poverty in Ashburnham in 2000 than there were in 1990. The community's poverty rate of 6.4% is below the regional, state rate and national rates of 6.6%, 9.3% and 12.4%, respectively.

Community	Number Below Poverty, 1990	Number Below Poverty, 2000	% Change in Number	Percent Below Poverty, 1990
Ashburnham	**332**	**350**	**5.4%**	**6.4%**
Region Average		852		6.6%
Massachusetts		573,421		9.3%
US		33,899,812		12.4%

Sources: U.S. Department of Commerce, Bureau of the Census 1990 and 2000

In the Montachusett Region …

Region-wide there was a decline in poverty from 1990 to 2000 of 14.3%. The poverty rates declined in nine of the twenty-two communities in the Montachusett Region.

The region's poverty level decreased during the 1980s, although not as significantly as the statewide decline. In 1980, 8.3% of all Montachusett households had incomes below the federally determined poverty level. By 1990, the poverty level for the region as a whole declined 1.9%, to 6.4%. Statewide, the poverty rate dropped from 9.8% in 1980 to 6.7% in 1990. Montachusett towns with the highest percentages of households below the poverty line in 1990 were the urban areas of Fitchburg (14%), Athol (11.7%) and Gardner (11.0%). In all three, poverty levels increased during the 1980s, in contrast to regional and statewide trends. In 2000, the regional poverty rate was 6.6%, up slightly from the 1990 level of 6.4% and lower than the 1980 rate of 8.3%. Communities in the Montachusett Region with the highest poverty rates in 2000 were Fitchburg (15.0%), Ayer (10.8%) and Winchendon (10.0%). For full statistics on Montachusett Region see Demographic Section.

(11) Labor Force

In the Community …

According to the Massachusetts Department of Employment and Training (DET), the City of Ashburnham's labor force of 2,040 persons in 1983 grew to 2,948 in 2003.

Annualized Labor Force and Unemployment Rates

Year	Labor force	Employment	Unemployment	Unemployment Rate	Statewide Rate
1983	2,040	1,844	196	9.6%	6.9%
1984	2,022	1,900	122	6.0%	4.8%
1985	2,017	1,918	99	4.9%	3.9%
1986	1,998	1,896	102	5.1%	3.8%
1987	2,007	1,918	89	4.4%	3.2%
1988	2,566	2,477	89	3.5%	3.3%
1989	2,540	2,421	120	4.7%	4.0%
1990	2,958	2,714	244	8.2%	6.0%
1991	2,983	2,662	321	10.8%	9.1%
1992	2,955	2,709	246	8.3%	8.6%
1993	3,067	2,868	199	6.5%	6.9%
1994	3,034	2,853	181	6.0%	6.0%
1995	2,834	2,663	171	6.0%	5.4%
1996	2,811	2,659	152	5.4%	4.3%
1997	2,890	2,743	147	5.1%	4.0%
1998	2,843	2,742	101	3.6%	3.3%
1999	2,839	2,733	106	3.7%	3.2%
2000	2,748	2,666	82	3.0%	2.6%
2001	2,769	2,638	131	4.7%	3.7%
2002	2,958	2,756	202	6.8%	5.3%
2003	2,948	2,731	217	7.4%	5.8%

While jobs will still be available in manufacturing in the future, it is apparent that locally, regionally and on the state and nation levels that the number of manufacturing jobs is shrinking and a corresponding increase in service jobs (ex. education, government and tourism) are increasing. The diversification of the local economy is advised to provide for entry level and part time jobs as well as well paying jobs in the high technology, education and manufacturing sectors. Diversification of the availability of local jobs available to residents will help the community sustain its local economy over the long term.

In the Montachusett Region …

According to Census figures, the Montachusett Region's labor force (those persons sixteen years and older) stood at 172,680 in 1990, and the civilian labor force consisted of 113,407. By comparison, the Census data for the decade showed a corresponding growth rate in the statewide civilian labor force of 7.8% during the 1980s.

In the 1990s, several Montachusett communities enjoyed an expansion of their employment base including Royalston (148%), Phillipston (83%), Sterling (61%), Shirley (56%) and Groton (54%). In these communities alone, 2,415 jobs were created. Since most of these communities had a smaller employment base to begin with, the absolute number of jobs created is less than the relative percentage of increased jobs.

The economic sectors in the region for which data are available are Government, Manufacturing, Agriculture/ Forestry/Fishing, Mining, Construction, Transport, communication and Utilities, Wholesale/Retail Trade, Services and Finance, Insurance and Real Estate. The industry sector that experienced a significant decline in employment was manufacturing. The dominant role of manufacturing in the region has diminished significantly in relation to other sectors of the economy and this change parallels the statewide trend in Massachusetts. The number of manufacturing jobs has steadily and slowly declined over the past twenty years. Employment in the mature industries of the region such as chemicals, plastics-products and paper is declining and plant closings are a continuing problem. Gardner, Fitchburg and Leominster were most severely affected, each losing more than 1,500 jobs.

The greatest job gains were made in the service sector. The wholesale/retail trade sector is also gaining a larger share of the region's employment, another indication that the region is experiencing a transition from a manufacturing-based economy to a service-related one.

(12) Unemployment Rate

In the Community …

Unemployment in the town typically follows state and national trends. According to the Massachusetts Division of Employment and Training (DET), in January 2004 the unemployment rates for the community, labor market area for the community, county, Montachusett Region, state and nation were:

Unemployment Rates – January 2004

	Labor Force	**Employed**	**Unemployed**	**Unemployment Rate**
Ashburnham	**2,986**	**2,750**	**236**	**7.9%**
Worcester County	389,865	362,785	27,080	6.9%
Massachusetts	3,421,800	3,231,200	190,600	5.6%
U.S.	146,068,000	136,924,000	9,144,000	6.3%

State and Local Data Source: Massachusetts Dept. of Employment & Training, www.detma.org, Not Seasonally Adjusted Data

U.S. Data Source: U.S. Dept. of Labor, www.bls.gov, Not Seasonally Adjusted Data

Annual unemployment rates for the above-listed areas from 1990 through 2003 were as follows.

	Ashburnham	Worcester County	Massachusetts	U.S.
1990	8.2	6.7	6.0	5.6
1991	10.8	10.0	9.1	6.8
1992	8.3	8.9	8.6	7.5
1993	6.5	6.8	6.9	6.9
1994	6.0	5.6	6.0	6.1
1995	6.0	5.3	5.4	5.6
1996	5.4	4.3	4.3	5.4
1997	5.1	4.0	4.0	4.9
1998	3.6	3.4	3.3	4.5
1999	3.7	3.4	3.2	4.2
2000	3.0	2.9	2.6	4.0
2001	4.8	4.1	3.7	4.7
2002	6.8	6.1	5.3	5.8
2003	7.4	6.7	5.8	6.0

State and Local Data Source: Massachusetts Dept. of Employment & Training, www.detma.org, Not Seasonally Adjusted Data
U.S. Data Source: U.S. Dept. of Labor, www.bls.gov, Not Seasonally Adjusted Data

Notable trends in employment and unemployment include:

- Ashburnham's unemployment rate was lower than or equal to the national rate for six out of the last fourteen years (1993, 1994, 1996 and 1998 through 2000).
- Ashburnham's unemployment rate was lower than or equal to the state's unemployment rate for only three out of the last fourteen years (1992 through 1994).
- Generally, Ashburnham's unemployment rate is equal to or slightly higher than the state's unemployment rate high during periods of statewide economic prosperity and decline.
- Highs in unemployment occurred during and after the recessions of 1991 and 2001 and were impacted after the 9/11 economic slowdown.

b) Local Workforce and Demographic Information: Education, Skill Levels and Training Needs

(1) Educational Attainment

In the Community …

The percentage of residents with a high school diploma was 33.0% in 2000. This rate is exceeds the state (27.3%) and national (28.6%) averages. Ashburnham residents are more likely to hold an Associates Degree (10.7%) than the average resident in the state (7.2%) or the nation (6.3%). Residents in the community are more likely to have earned a four-year degree or to have advanced beyond a four-year degree. In 2000, 17.1% of residents had a Bachelor's Degree compared with the state at 17.1% and 21.0% average for state and national residents. Nearly one in ten residents (9.0%) of local residents held graduate or professional degrees compared with the state at 13.7% and 8.9% average for state and national residents, respectively.

	High School Diploma	Associate's Degree Earned	Bachelor's Degree Earned	Graduate of Professional Degree Earned
Ashburnham	**33.0%**	**10.7%**	**17.1%**	**9.0%**
Montachusett Region	31.4%	17.1%	16.7%	10.6%
Massachusetts	27.3%	7.2%	17.1%	13.7%
Nation	28.6%	6.3%	21.0%	8.9%

Source: US Census 2000

In the Montachusett Region …

The percentage of Montachusett residents age 25 and over who graduated from high school stood at 71.7% in 1980, slightly beneath the state average of 72.2% but above the national rate of 66.3%. Between 1980 and 1990, the region's graduation rate increased by 10.6%, to 82.2%. This rate significantly exceeds that of the nation (75.2%) and slightly exceeds the state level (80.0%). Also during the 1980's, all Montachusett communities, except Harvard, experienced at least a 5% increase in the number of high school graduates. Harvard began and ended the decade with the region's highest percentage of high school graduates (1980 - 95%, 1990 - 97%). The percentage of Winchendon residents with high school diplomas jumped from 58.5% in 1980 to 76.8% in 1990, representing an 18% increase over the course of the decade. The percentage of Athol residents with a high school diploma increased by 13.7% during that period. In 1990 and 2000, the percentage of high school graduates in the larger urban centers was lower than average, meaning that far more people in cities lack high school degrees.

In 1990, the percentage of Montachusett residents with a bachelor's degree was 22.7%. (This trails the comparable statewide rate of 27.2%, but exceeds the nation-wide rate of 20.3%. Again, in 1990 Harvard contained the largest percentage of four-year college graduates (41.5%). Towns containing the lowest percentages of four-year college graduates included Templeton (10.5%), Athol (12.1%), Clinton (13.1%), Winchendon (13.4%), and Fitchburg (13.5%).) In 2000, the percentage of Montachusett residents with a bachelor's degree decreased to 16.7%.

(2) Per Pupil Expenditures

The Town of Ashburnham's per pupil expenditures rose from $5,309 in 1998 to $6,537 in 2002.

Per Pupil Expenditures

YEAR	EXPENDITURE PER PUPIL
1998	$5,309
1999	$5,644
2000	$5,951
2001	$6,451
2002	$6,537

Source: Massachusetts Division of Local Services. Oakmont Regional School District (Ashburnham and Westminster).

(3) Workforce Development Programs Serving the Community

Workforce retraining programs are funded by the Federal Department of Labor and the Commonwealth of Massachusetts, Division of employment and Training. The North Central Massachusetts Workforce Investment Board, Inc. is one of the many WIBs in the Commonwealth. This partnership of private and public sector representatives responds to local workforce training needs and allocates resources to training agencies in the region so that training is available to the population in the Montachusett Region.

The NCMWIB works in tandem with the MA DET's North Central Career Center, located on Erdman Way in Leominster. Training programs for unemployed and displaced persons can be accessed at this facility. Additional information concerning programs and services offered at the Career Center can be found at www.mass.gov.

(4) Workforce Development Programs Compatibility with Business Employment Needs in the Community

The Massachusetts Division of Employment and Training and the North Central Massachusetts Workforce Investment Board have been responsive to the needs of training the local present and future workforce. Curricula has been developed and training is available at designated centers for persons entering the growing fields of health care and the traditional fields of plastics manufacturing and of mold making and repairing. The technology schools and colleges located in the Greater Northern Worcester County Region have been responsive to the needs of the local business community. Continued analysis of the worker training needs of businesses should continue to ensure that the local workforce continues to remain employed and employable, especially in the emerging technology fields such as biotechnology and nanotechnology.

c) Workforce Transit and Transportation Issues

The movement and destination of the local workforce, places of work destinations, travel time to places of work and an analysis if local transit and transportation needs are discussed below.

(1) Commute times and journeys to work

An overwhelming percentage of Ashburnham residents (88.3%) drove alone to work in 2000.

	Car, truck, or van--drove alone	**Car, truck, or van-carpooled**	**Public Transportation (including taxicab)**	**Walked**	**Other Means**	**Worked at home**
Number Persons Traveling to Work	2490	226	23	17	8	56
Percent Persons Traveling to Work	88.3%	8.0%	0.8%	0.6%	0.3%	2.0%

Source: U.S. Census 2000

The average commuting time (one way) for an Ashburnham resident (31.4 minutes) exceeded the Montachusett Region (29.1 minutes), State (27.0 minutes) and National (25.5 minutes) averages.

Community	**Mean travel time to work (minutes)**
Ashburnham	**31.4**
Ashby	31.4
Athol	24.6
Ayer	28.3
Clinton	24.0
Fitchburg	23.2
Gardner	24.1
Groton	33.5
Harvard	32.2
Hubbardston	35.5
Lancaster	26.2
Leominster	25.5

Lunenburg	26.0
Petersham	29.6
Phillipston	29.4
Royalston	35.1
Shirley	30.9
Sterling	28.8
Templeton	25.2
Townsend	36.4
Westminster	28.7
Winchendon	29.5
Montachusett Region	29.1
Massachusetts	27.0
U.S.	25.5

Source: U.S. Census 2000

(2) Availability of needed services (based on infrastructure plans and priorities)

Transit services to and from the Boston Metropolitan area can be accessed via the MBTA commuter rail stop in Fitchburg (and other locations along the Fitchburg-Boston rail line).

Other transportation issues can be found within the Transportation Chapter of this Community Development Plan.

d) Commercial and Industrial Real Estate

(1) Available Commercial and Industrial Real Estate

The EO 418/Community Development Plan resources available are insufficient to conduct a full assessment of all potential available commercial and industrial sites within the community. Some, known sites have been discussed in some detail, below. We recommend that further analysis be completed identifying existing buildings and land for commerce or manufacturing utilizing Assessors records, conducting a "windshield survey", analyzing "Pictometry" data or some combination of these. Local Realtors should also be contacted for current information concerning the availability of such properties.

(2) Potential for Development of Commercial and Industrial Real Estate

Historically, commerce and industry had clustered near the rivers using water power to power the mills producing goods. Ashburnham was no stranger to mill development during the 19th Century Industrial Revolution. Mills were mostly clustered in the community's downtown with some other businesses scattered throughout the rest of the community. This type of commercial and industrial development is typical of many communities in New England whose economy transformed from an agrarian to an industrialized one. In some communities industrialization continued with a proportionate population increases with urbanization of the community or the community's industrialization did not occur or moved out of the community.

More prudent commercial and industrial development patterns promote the development of land along major transportation routes with adequate infrastructure (water, sewer, drainage, roads and telecommunications) to support commercial and industrial development. Promoting this type of development pattern, where desired by the community, may mitigate the impact of traffic upon residential neighborhoods.

Areas of consideration for future commercial and industrial development are found in the following table.

AREAS OF POTENTIAL FUTURE

COMMERCIAL & INDUSTRIAL DEVELOPMENT

AREA	COMMERCIAL OR INDUSTRIAL USE
Downtown	Commercial and Mixed Uses (i.e. commercial and housing)
101 Industrial Park	Industrial or Re-zoning due to Topography
Winchendon Road and Hunter Avenue	Town Services
Williams Road	Town Services
Fitchburg Road/Route 12 East	Extend Village Center Zone to include Historic District

(3) Notable Vacancies in Commercial and Industrial Real Estate

One notable vacancy is 150 Center Street. This former commercial (restaurant) site has been discussed in more detail, below.

(4) Possible "Brownfield" Sites and Potential Reuse Options

The State Department of Environmental Protection (DEP) maintains a list of addresses where hazardous substances have been released, potentially threatening the health of the residents of the community - www.state.ma.us/dep. Sites where contamination may be perceived to be in the ground or may actually be in the ground are considered "brownfields".

The subject of brownfields has been covered in depth within the Open Space and Resource Protection Element of this Community Development Plan. In Ashburnham, the former Caouette Catering, Spectro-Coating and the DPW site are local brownfields. While the DPW site's future use may be housing, commercial or both, the future uses of the other two brownfields has yet to be determined. The MRPC recommends that the community consider immediate study and potential redevelopment of future brownfields (should they be found in the community) for some public purpose benefiting low, moderate and middle-income persons and/or preservation of open space. Potential new uses are ultimately to be determined by the municipality and may or may not be "market driven".

The potential reuse options available to the community should be governed by state and local zoning laws. With input received from local officials, residents including a review of local and regional planning documents, some potential site reuses to be considered might be:

These potential new uses are ultimately to be determined by the municipality and may or may not be "market driven". Further study and reuse options should be explored more fully should the community wish to continue with the above-listed potential new uses. The MRPC recommends that new uses on these sites be implemented with this and other planning documents and input from local officials and residents.

(5) Availability of Land and Buildings for Economic Development

This issue was previously addressed under "Notable Vacancies in Commercial and Industrial Real Estate" and "Brownfield Sites", above.

e) Compatibility of Commercial and Industrial Land Uses with Abutting Uses and Neighboring Communities

(1) Compatibility of proposed economic development with adjacent land uses and resource protection concerns

This information can be found below under "Step 3: Assess Economic Development Objectives in Relationship to Growth Suitability Maps".

5. FUTURE ECONOMIC PROFILE

a) Projected Job Growth/Work Force Characteristics

As the local economy has been linked to the national and state economies for generations, local and regional job availability is anticipated to follow national and state trends. Availability of jobs will be linked to retention of existing businesses in the community, new commercial and industrial development in the community, home-based business development and continued jobs availability in the tri-cities metropolitan area of Fitchburg, Gardner and Leominster, and the Greater Worcester and Greater Boston metropolitan areas.

(1) Nation

Projections for the American workforce covering 2000 to 2010 have been issued by the Bureau of Labor Statistics (BLS), U.S. Department of Labor, providing information on where future job growth is expected by industry and occupation and the likely composition of the work force pursuing those jobs. Over the 2000-2010 period, total employment is projected to increase by 15 percent, slightly less than the 17 percent growth during the previous decade, 1990-2000.

The BLS projections were completed prior to the tragic events of September 11. While there have been numerous immediate economic impacts of this tragedy, the nature and severity of longer-term impacts remain unclear. At this time, it is impossible to know how individual industries or occupations may be affected over the next decade. BLS will continue to review its projections and, as the long-term consequences of September 11 become clearer, will incorporate these effects in subsequent analyses of industrial and occupational outlook.

Industry Employment

- The service-producing sector will continue to be the dominant employment generator in the economy, adding 20.5 million jobs by 2010.
- As employment in the service-producing sector increases by 19 percent, manufacturing employment is expected to increase by only 3 percent over the 2000-2010 period. Manufacturing will return to its 1990 employment level of 19.1 million, but its share of total jobs is expected to decline from 13 percent in 2000 to 11 percent in 2010.
- Health services, business services, social services, and engineering, management, and related services are expected to account for almost one of every two nonfarm wage and salary jobs added to the economy during the 2000-2010 period.

Occupational Employment

- Professional and related occupations and service occupations are projected to increase the fastest and to add the most jobs-7.0 million and 5.1 million, respectively. These two groups-on opposite ends of the educational attainment and earnings spectrum.
- Eight of the 10 fastest growing occupations are computer-related, commonly referred to as information technology occupations.

Education and training categories

- Employment in all seven education or training categories that generally require a college degree or other post secondary award is projected to grow faster than the average across all occupations. These categories

accounted for 29 percent of all jobs in 2000 but will account for 42 percent of projected new job growth, 2000-2010.
- The four categories requiring work-related training are projected to grow more slowly than average, but would still add a substantial number of jobs.

Source: US Department of Labor, BLS Release of 2000-2010 Employment Projections

(2) State

By 2008 the Massachusetts economy is expected to expand by 10 percent or 345,000 new jobs – the bulk of which should arise in technology-driven industries. An additional 797,000 jobs should arise from the need to replace workers who retire, change careers, or advance up the career ladder. In total more than 1.1 million jobs should result.

Technology, demographics, and the globalization of commerce will play ever more important roles in shaping job growth through 2008. Advances in computers combined with those in telecommunications are creating a new economy based on information technology (IT). These developments along with the rapid aging of the population will greatly impact the growth of Massachusetts' labor force and job market. Baby boomer – those born between 1946 and 1964 – will continue to comprise the largest group of workers until about 2008 when they begin to retire. With most of this group still a decade away from retirement, the number of Massachusetts workers will remain at a record high.

The rapid networking of businesses and homes to the Internet will also transform the economy and the way business is conducted. The Internet is seeding up and broadening access to information. It is also increasing competition and the globalization of trade, and spurring additional investments in hardware, software, and education and training. There isn't an industry or company that can avoid incorporating the Internet in its future. Within this new economy, jobs will continue to exist for workers at all levels of education and training, but downsizing, mergers, and acquisitions will still occur.

Key highlights of the projected changes include:

- Services industries are projected to generate more than four out the five (83%) new wage and salary jobs in Massachusetts.
- As a result of rapid growth in technology-driven services, demand for professional and technical workers should expand the fastest of all workers and generate the most new jobs.
- Jobs for less skilled workers will grow at a slower pace.
- Of the 25 occupations growing the fastest, more than half are related to information technology or health care.
- The need for workers who are educated and highly skilled will grow as technology and health care. Jobs for more highly skilled workers should increase the fastest of all. Of the 345,000 projected new jobs generated in the economy over the next 10 years, about half will require a bachelor's degree or higher.
- Retirements and other replacement needs will account for 70 percent of the more than 1.1 million projected job openings through 2008.

Not all industries will contribute equally to the job growth. Some industries like IT will grow rapidly and add large numbers, while others, particularly those in manufacturing, will continue to decline, but at much slower rates.

Services industries are projected to generate 267,000 jobs or 83 percent of all new jobs, as they have in the current economic expansion.

Only four industries will generate 85 percent of the new jobs: business services, which include computer software and related IT services (107,300), health services (65,800), engineering and management services (33,400), and social services (22,100).

Business demand for computer software and other IT services, particularly networking, data communications, and other online services should alone generate 69,100 new jobs – the most jobs of any industry in the state. From 1988

to 1998 this industry grew 107 percent creating 39,700 high paying jobs. Computer software and related IT services is now the largest high-tech industry in the state.

In retailing, jobs should increase by more than 35,000 – the bulk (56 percent) of which should arise from the growth of eating and drinking places, the largest retail industry.

Fiscal pressures will keep public sector employment from expanding faster then 7 percent. Most new jobs should arise at the local level from the growth of elementary and secondary schools – one of the biggest employers of government workers. Local governments jobs should increase by 11 percent, the state by 2 percent and the federal government should be reducing its workforce by 5 percent.

The historic decline in manufacturing should moderate over the 1998-2008 period as exports expand and more manufacturers retool to stay competitive. Nevertheless, jobs should shrink 11 percent from 448,400 to 398,900 by 2008, as more aspects of production are automated or outsourced. In total, manufacturing should account for 11.4 percent of Massachusetts' jobs, down from the 14.1 percent it accounts for now.

The rapid acceptance and use of the Internet and or wireless technologies will also create new opportunities and lay the framework for additional technologies and investments in facilities, hardware, software, services and human capital. This trend should benefit Massachusetts' manufacturers at the forefront of research and development.

For every new job created from economic growth, there will be more than two jobs resulting from replacement needs.

Workers with more skills will have more job opportunities and greater access to better paying jobs then those with less training.

Professional and technical workers are projected to have the most openings overall – 371,000. They will have the largest number of replacements (176,900) behind service workers. Propelled by these gains, professional and technical workers should account for almost 30 percent of Massachusetts' workforce by 2008. New job projections by sector include: Production workers – 151,600 new jobs; Marketing and Sales Jobs – 147,000 new jobs; Clerical and Administrative Support Jobs – 129,700 new jobs; Managerial Jobs – 92,300 new jobs.

Jobs for more highly skilled workers will increase faster than jobs for less skilled workers. All jobs will require more technological "know-how" as companies make better use of technology.

Of the 345,700 new jobs projected to emerge in Massachusetts, more than three of every five (62 percent) will require an associates degree or higher. Due to replacement needs, jobs will continue to be available at all levels of education and training, but workers with more education and training will have more options and better prospects for rising up the career ladder and earning higher salaries. Indeed, a high-skilled workforce will remain key to maintaining Massachusetts' leadership in both technology and the emerging new economy.

Source: Massachusetts Division of Employment and Training, Massachusetts Employment Projections through 2008: A Focus on the Jobs, the Industries, and the Workforce

(3) Availability of needed services (based on infrastructure plans and priorities)

When examining infrastructure needed to support business retention and expansion, all infrastructure needed by businesses must be assessed in order to asses existing capacities and identify potential gaps potentially inhibiting future commercial and industrial properties development (ex. roads, drainage, water distribution, wastewater treatment, high-speed telecommunications and electricity). A local capital improvements plan should include an analysis of the needs of commercial and industrial users and their infrastructure needs. The community should provide for such services for the maintenance of the existing commercial and industrial users (and employers) to maintain the local workforce and provide for the generation of tax revenue.

(4) Availability of housing in the community and region for the present and expected workforce (considering expected income of the workforce)

It is clear that, according to the existing demand for housing units and their corresponding prices, the availability of housing units is behind demand. While this topic is covered in great depth within the Housing Element of this Community Development Plan, it is important to note that businesses depend upon the availability of local labor and adequately-priced housing units must be available to house the workforce.

(5) Needs of local and regional businesses based on projected expansion plans or plans to move from the town or region

The Town of Ashburnham has been working proactively with the business community on many fronts to main and grow the number of businesses and jobs in the community. Some examples of this are the completion of a study and committee focusing on Ashburnham's Downtown. Growth of this organization appears to be evidence that the public and private sectors are working together to make the improvements needed by the local business community to remain and grow their concerns. Recent passage of several zoning changes (May 2004 Annual Town Meeting) appear to be targeted at fostering businesses related to a variety of business types linked to appropriate land uses in the community (ex. establishment of Green Business Zone near walking, hiking and bicycling trails in the northeastern part of the community).

Revenue generation and service demands (e.g. water supply, sewer capacity, other resource protection considerations, infrastructure, road network, public transit planning, etc.) attributable to predicted future economic development.

Local officials are aware of the need to improve the local infrastructure. Improvements to the wastewater collection system have been implemented. These and other local infrastructure improvements are necessary for business retention and attraction.

Some local transportation issues have been addressed and are reported within this Community Development Plan, Transportation Chapter.

(6) Potential Growth of the Business Community

Growth of businesses in Ashburnham appears to be a genuine desire of the municipality, especially within the center and appropriately designated zones such as the new "green business zone". Continued growth of local businesses will help to:

- Retain and increase the number of jobs available to local residents
- Provide some of the services and retail products needed by residents
- Provide tax revenue for the town

National, state and local economic growth and "health" are closely linked. It has been proven that Ashburnham's increase and decrease in its unemployment rate closely follows national and state highs and lows (above). Declines in manufacturing in the nation and the state have also affected Ashburnham's workforce. Potential growth will follow the existing trend in the stabilization or loss of manufacturing jobs coupled with an increase in the number of jobs in services. The loss of manufacturing jobs may be curtailed if new products continue to be developed especially in the fields of polymers, biotechnology and nanotechnology. Manufacturers of polymer-based products and those related to the biotechnology industry are located within commuting distance from Ashburnham.

Additional jobs will be created as a result of Ashburnham's new business zones created at the May 2004 Annual Town Meeting. The creation of the green business zone will create jobs in services related to ecotourism. While some jobs in service businesses sometimes pay less than the majority of jobs in the manufacturing sector, service jobs are important for a number of reasons:

- Service jobs are sometimes quite high paying positions (ex. those service jobs in the finance, legal and some high technology professions)
- They will be new jobs added to the local economy
- Some entry-level service positions are excellent opportunities for young workers (ex. of high school and college ages) to learn job skills preparing them for long-term employment opportunities
- Some service positions may be available to adult workers who may need to supplement their existing incomes
- Service jobs also help some seniors who require employment in their "post-retirement" years

6. STEP 2: ESTABLISH ECONOMIC DEVELOPMENT GOALS

A series of economic development goals for the Town of Ashburnham have been provided for consideration for implementation. These goals have been developed by the community and its Community Development Planning consultant, the MRPC, using comments gathered at the community forum, information gathered from local officials after the community forum, a review of existing planning documents and local bylaws, and a statistical profile of the Town of Ashburnham, created in Step 1 above. The community's economic development goals are as follows.

Community Goals, Objectives and Recommendations

Goals:

- Encourage the development of and help to promote tourism in the community (eco-tourism, agri-tourism and historic tourism), especially within the new Green Business zone near Mt. Watatic and Bush Hill. The presence of recreation amenities, farms and historic buildings and old homes is important to the tourism industry.
- Complete an analysis of need for transit services for the local workforce to places of employment from Ashburnham.
- Ensure local zoning accommodates the need for the creation of assisted living facilities for the elderly, who are "outgrowing " their homes and want to stay in the community. This also provides places of employment for local residents and is in the field of healthcare, which is one of the fastest growing sectors in Massachusetts.
- Expand tax base through controlled commercial development reflecting the character of the community and village centers.
- Encourage the appropriate growth of small business convenience stores and retail services to meet daily needs of residents as the town matures, especially in the South Ashburnham neighborhood, while not ignoring the needs of other neighborhoods in the community.
- Incorporate local Community Development Planning efforts into other local and regional plans as deemed appropriate by local officials.
- The community should continually improve the local transportation infrastructure to ease commuting within and outside the community making the system safer for use.
- Promote regional cooperation in housing, transportation and boundary development issues.
- Promote the diversification of jobs in the community.
- Support and expand existing community efforts to increase development of businesses that provide jobs, increase tax revenues and expand opportunities for existing businesses.
- Encourage businesses that are compatible with adjacent land uses and resource protection concerns.
- Create a community outreach and education program to educate the public about economic development, workforce needs, and how (economic development) can fit into the unique environment of the town.
- Assess the needs of local and regional businesses based on projected expansion plans.
- Identify the types of businesses we want to encourage in the community and update the use table in the zoning bylaw accordingly.
- Create and consistently implement and fund a capital improvements program to maintain existing infrastructure in order to facilitate business development, enable the workforce to access local commercial and industrial businesses and facilitate the delivery of raw materials and shipment of finished goods.

- Encourage employment growth to keep pace with housing growth.
- Encourage the development of housing appropriate and affordable for the workforce needed by the businesses in the community.
- Promote development that is consistent with the Sustainable Development Principles promulgated by the Massachusetts Office for Commonwealth Development. In addition, promote compact development, expand housing opportunities, reutilize brownfields and abandoned buildings, plan for livable communities, promote livable communities, advance sound water policy, preserve working natural landscapes and promote sustainable development via other actions.

Objectives

- Identify and quantify the amount of commercial space and develop site-specific reuse plans for commercial and possible housing uses in the center.
- Maintain downtown parking capacity and management plans downtown to help retain local downtown businesses.
- Educate residents and local officials about the benefits of adopting the Community Preservation Act to plan for and implement economic development initiatives.
- Expand tax base through controlled commercial development reflecting the character of the community and village centers.
- Utilize grant resources where available to accomplish objectives.

Recommendations

- Work proactively with the Ashburnham Focus Committee and the downtown business community and other parties to make improvements to traffic management and flow at and near the State Routes 101 and 12 intersection.
- Work proactively with the Ashburnham Focus Committee to promote tourism of areas such as the rail-trail, Mount Watatic and Bush Hill
- Work proactively with the Greater Gardner Area Chamber of Commerce to promote the existence of local business services and products through the Select Board, Ashburnham Focus Committee and/or Industrial Development Commission (IDC).
- Increase the level of understanding of and access the economic planning and development services of the Montachusett Regional Planning Commission (MRPC) to enhance business retention and attraction in the community.
- Develop a website promoting businesses in the community.
- Local officials are encouraged to access technical assistance from public and private resources as needed by the town.
- The community should use local zoning to ensure that appropriate areas are zoned for commercial and industrial uses, while balancing the needs of housing and the protection of open spaces and natural resources.
- Local officials are encouraged to contact business advocacy and tourism organizations in an attempt to collaborate on business retention with these existing groups and/or create a local business visitation program including several key members of the local government (ex. representatives from the Focus Committee, Board of Selectmen and/or Planning Board).
- We recommend that town officials participate in the high-speed data transmission system map creation process to help the MRPC construct the most effective GIS map possible.
- Any “streamlining” of local permitting processes for businesses will aid local officials with the review process and better educate businesses about expectations of them from local officials facilitating communication and between the applicants and local permitting authorities. Local education about the benefits of “streamlining” the permitting process and implementing a streamlined permitting system should be accomplished.
- The creation of a “development review group” consisting of local officials from all, relevant permitting departments, boards and necessary staff should be completed.
- We recommend further study of the availability of daycare, to calculate the need of local businesses and workers prior to initiating obtaining funds for such a program, be completed.

- Local officials are encouraged to contact local, regional and state agencies and organizations to prepare the necessary plans and make improvements to safeguard local historical assets.
- Further analysis of developable parcels and possible, future reuse of municipal buildings should be analyzed as potential areas of commercial development.
- While there are no known grant-funding sources for marketing and promotions, a number of successful marketing and promotional efforts can be accomplished through partnerships among municipalities, business associations, chambers of commerce and visitors associations. Municipal officials are encouraged to contact the appropriate group when planning to implement marketing or promotional efforts. Examples of some of the possible appropriate groups includes, but is not limited to the: Greater Gardner and North Central Massachusetts Chambers of Commerce; Johnny Appleseed Trail Visitor Association, Inc.; and, representatives of businesses within the community.
- Utilize the Economic Development Incentive Program (EDIP) and Development Initiative Financing (DIF) to help local businesses grow and create employment opportunities and to pay for infrastructure costs related to business development. (Consistent education should be provided to local officials [ex. newly elected and hired officials] to ensure that the benefits of this program, both to the community and local businesses, are clearly understood.)
- The municipality should encourage the education of local residents to the best of its ability with the resources available. Having an educated workforce is an important aspect of business retention and attraction efforts. Preparing the future workforce for existing businesses (ex. manufacturing and services) is as important as providing students with the skills needed to move into growing areas of employment (ex. healthcare) and emerging markets in the region (ex. biotechnology and nanotechnology).

The above recommended goals are supported by the Ashburnham Downtown Planning Study, Working Paper No. 1, The Ashburnham Master Plan, Blueprint for Growth: A Master Plan Working Manual, Downtown Planning Study, Greater Gardner 2000 Economic Development Strategy, 1995, and Greater Gardner Sustainable Growth Management Plan, November 1999.

7. STEP 3: ASSESS ECONOMIC DEVELOPMENT OBJECTIVES IN RELATIONSHIP TO GROWTH SUITABILITY MAPS

An assessment of economic development objectives in relationship to the input received at the community forum and subsequent comments received from local officials has been completed and possible economic development initiatives have been mapped. (Economic development goals and strategies related to these maps can be found above in Step 2 Establish Economic Development Goals and later in Step 4 Identify And Evaluate Alternative Economic Development Strategies.) Using this map, residents can identify target areas for various types of economic development based on zoning. (Another essential map to consider in locating new commercial and industrial uses is the Growth Suitability map located in the Open Space and Resource Protection section of this Community Development Plan. This map was analyzed when the following comments concerning commercial and industrial development were formulated.)

According to the local zoning bylaws there are seven zones in the community. They are: Residential-A; Residential-B; Business; Green Business; Village Center; Industrial; and Light Industrial-B. There are two Overlay Districts. These are: Light Industrial-A; and Water Supply Protection. Comments received at the Community Forum, and subsequent comments made by local officials, concerning commercial and industrial development in the community related to the Economic Development Implementation Map are:

- Town services are/should be developed at the intersection of Winchendon Road and Hunter Avenue.
- An industrial park should be developed along Route 101 and High Street in South Ashburnham.
- Mixed Use businesses should be allowed on Murray Road.
- Light Industrial uses should be encouraged along the railroad in South Ashburnham.
- While the land at the intersection of Main Street South and Westminster Street is zoned Residential-A, this land should be examined for existing and/or future commercial and/or industrial uses.
- Town services are/should be developed on Williams Road north of Platts Road and south of Center and Central Streets.

- Commercial and mixed uses exist east of the Town Center on Route 12. Within this area exists a National Register Historic District. This area is located entirely within a Residential-A zone. Consideration should be given to re-zone this commercial and mixed use area. Inclusion of this area within the "Village Center" zone may be warranted. Village Center zoning should allow for the existence and development of businesses that exist in harmony with the Historic District and foster historic tourism.
- Another Historic District apparently exists on Russell Hill Road east of its intersection with Crosby Road. While extending the Village Center zone east as far as this neighborhood may not be prudent, promotion of historic tourism in the town is encouraged through non-zoning measures for this area.
- Finally, rehabilitation of the vacant factory (formerly Spectro-Coating, Inc. and Advanced Cable Ties, Inc.) into senior housing or mixed use was identified as a need. The site is under new ownership and the community awaits redevelopment.

a) Compatibility with Adjacent Land Uses and Communities

Proposed reuse and development of sites within the Town Center (ex. reuse of the DPW site) appear to be compatible with existing uses. The potential development of industrial area in South Ashburnham will be compatible with the Gardner's development of the Summit Industrial Park. Any possible rezoning of this land to non-commercial or non-industrial use should take into account land use in the adjoining community. Allowing for green business development along State Route 119 should be encouraged while preserving open spaces and resources within this new zone.

8. STEP 4: IDENTIFY AND EVALUATE ALTERNATIVE ECONOMIC DEVELOPMENT STRATEGIES

A variety of strategies, including state and/or federal funding programs and/or local regulatory and non-regulatory strategies, have been provided to the community. Because of the complexity of economic development issues, the town should consider should both regulatory and non-regulatory strategies. Regulatory strategies will be based on zoning and other local by-laws. Non-regulatory options will include assistance to businesses, business organizations, and workforce development providers, support and promotion or appropriate economic development and use of creative financing programs and incentives.

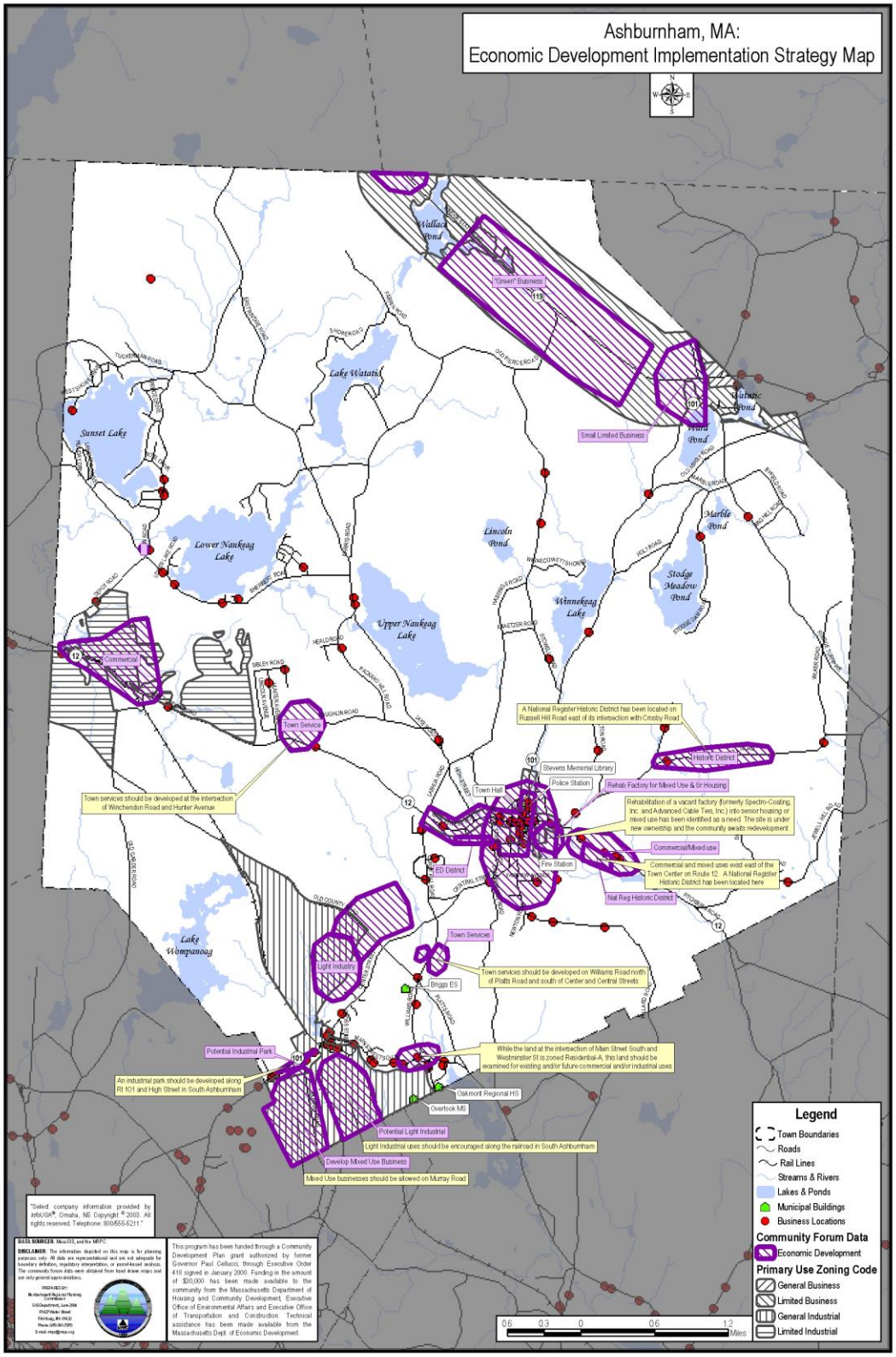
Implementation strategies include:

- Continue the work to improve the central business district (CBD) and all existing commercial, industrial and village centers in the community.
    - Benefit: The town has worked productively and consistently to plan for and make improvements to the Town Center also known as a CBD. The work of the Downtown Focus Committee, now Ashburnham Focus Committee, business owners, local officials and residents will help the community make the improvements it deems necessary in order to improve the Center and maintain the CBD as the town's center for retail products and services provided to local residents.
- Establishment of an outreach program to businesses fostering communication between local officials and the private sector. Consider collaborating on this initiative with business advocacy organizations operating in the community.
    - Benefit: Consistently communicating with the private sector keeps local officials informed about the needs of the local business community bolstering the retention of businesses and jobs in the community.
- Continue to work proactively to identify and assist with the conversion of vacant or underutilized commercial and industrial buildings for appropriate uses needed in the community. These uses may be commercial, industrial, residential or the creation of open space. Site conditions, needs of the community and local zoning should be used to guide local officials in determining new uses of these properties.
    - Benefit: Redeveloping "brownfields" and similar sites will increase local tax revenue, improve the environmental conditions of the community, eliminate any existing blight in a neighborhood and provide new jobs in the community. Redevelopment of 150 Center Street and possibly the existing Town-owned DPW site should be accomplished to achieve public benefits (ex. increasing, local tax revenue, cleaning the environment, and creating new jobs or housing for residents).

- Establishment of a new or work cooperatively with an existing local economic development entity (such as an economic development and industrial corporation, community development corporation, redevelopment authority or other entity) charged with the redevelopment of a specific site.
    - Benefit: Creation of such a local entity would give the community control over redevelopment of sites as desired by the community, such as the DPW site.
- Work in cooperation with local officials to develop permitting checklists and possibly streamline the local permitting process for developers while protecting the interests of the community and its residents.
    - Benefit: Creation of a permitting checklist is a proactive step toward fostering improved communication among the public and private sectors.
- Creation of a community outreach program to educate the public about what economic development is, what are the economic development and workforce needs of the area, why economic development is a good idea for the community, and how it can fit into the unique environment of the town. The program can include discussions in the local newspaper, community cable television, and meetings or business organizations and other civic groups.
    - Benefit: Educating the community about the many aspects of economic development (ex. workforce development, TIFs, brownfields) will aid local officials and residents about the benefits of these programs to the business community who retain and create jobs in the community.

9. STEP 5: ESTABLISH AN ECONOMIC DEVELOPMENT IMPLEMENTATION STRATEGY AND LOCATION MAP

The Strategy includes the economic development goals of the community combined with a graphic representation of the goals. The map reflects the goals at the end of Step 2 combined with the action strategies contained within Steps 3 and 4, above.

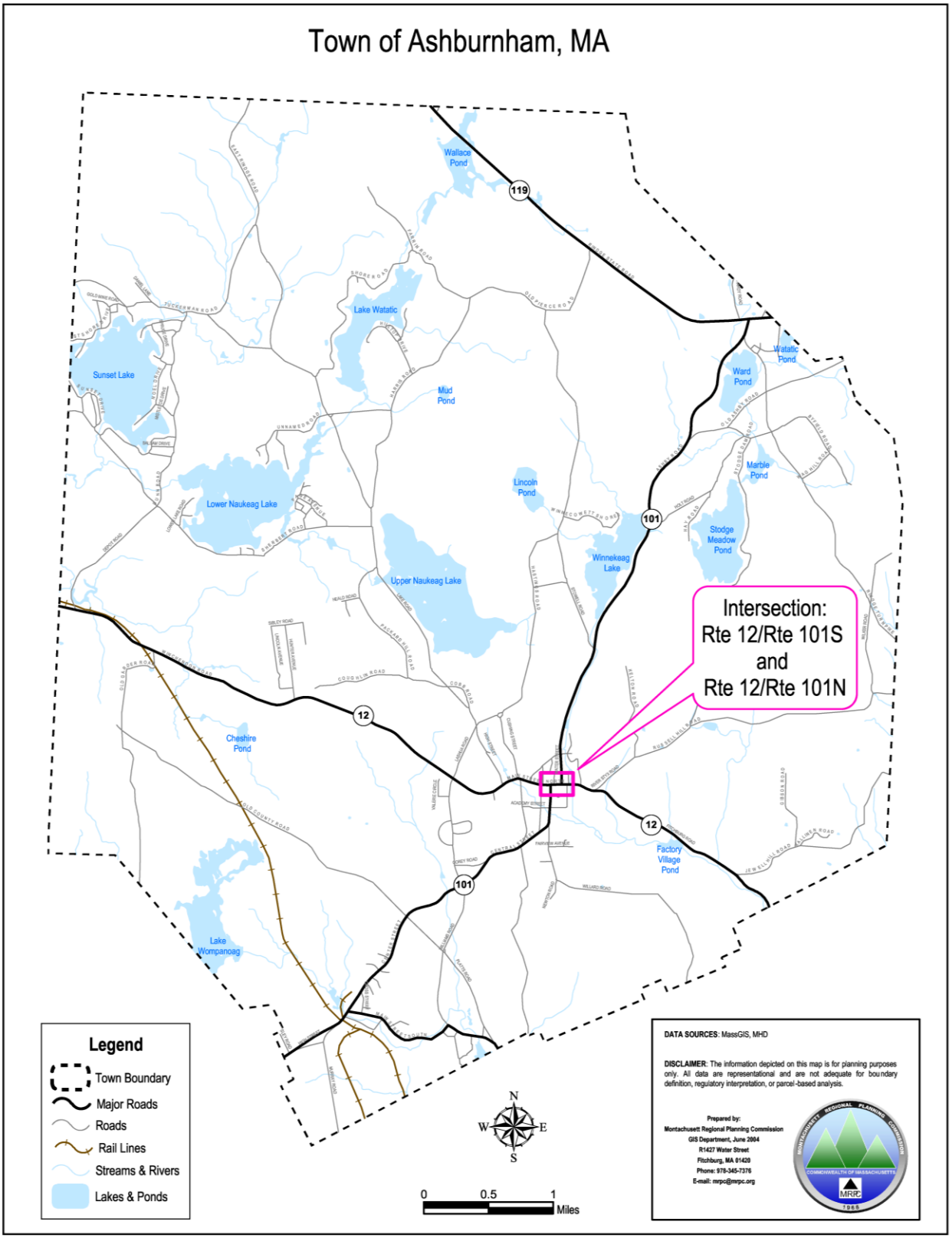

Ashburnham, MA:
Economic Development Implementation Strategy Map
Wallace Pond
"Green" Business
Lake Watatic
Watatic Pond
Sunset Lake
Ward Pond
Small Limited Business
Lower Naukeag Lake
Lincoln Pond
Marble Pond
Stodge Meadow Pond
Winnekeag Lake
Upper Naukeag Lake
Commercial
Town Service
A National Register Historic District has been located on Russell Hill Road east of its intersection with Crosby Road
Historic District
Stevens Memorial Library
Police Station
Town Hall
Rehab Factory for Mixed Use & Sr Housing
Town services should be developed at the intersection of Winchendon Road and Hunter Avenue
Rehabilitation of a vacant factory (formerly Spectro-Coating, Inc. and Advanced Cable Ties, Inc.) into senior housing or mixed use has been identified as a need. The site is under new ownership and the community awaits redevelopment
Commercial/Mixed use
Fire Station
ED District
Commercial and mixed uses exist east of the Town Center on Route 12. A National Register Historic District has been located here
Nat Reg Historic District
Lake Wompanoag
Town Services
Light Industry
Town services should be developed on Williams Road north of Platts Road and south of Center and Central Streets
Briggs ES
While the land at the intersection of Main Street South and Westminster St is zoned Residential-A, this land should be examined for existing and/or future commercial and/or industrial uses
Potential Industrial Park
An industrial park should be developed along Rt 101 and High Street in South Ashburnham
Oakmont Regional HS
Overlook MS
Potential Light Industrial
Light Industrial uses should be encouraged along the railroad in South Ashburnham
Develop Mixed Use Business
Mixed Use businesses should be allowed on Murray Road
"Select company information provided by InfoUSA®, Omaha, NE Copyright © 2003. All rights reserved. Telephone: 800/555-5211."
DISCLAIMER: The information depicted on this map is for planning purposes only. All data are representational and are not adequate for boundary definition, regulatory interpretation, or parcel-based analysis. The community forum data were obtained from hand drawn maps and are only general representations.
This program has been funded through a Community Development Plan grant authorized by former Governor Paul Cellucci, through Executive Order 418 signed in January 2000. Funding in the amount of $30,000 has been made available to the community from the Massachusetts Department of Housing and Community Development, Executive Office of Environmental Affairs and Executive Office of Transportation and Construction. Technical assistance has been made available from the Massachusetts Dept. of Economic Development.
Legend
Town Boundaries
Roads
Rail Lines
Streams & Rivers
Lakes & Ponds
Municipal Buildings
Business Locations
Community Forum Data
Economic Development
Primary Use Zoning Code
General Business
Limited Business
General Industrial
Limited Industrial
Miles

VI. TRANSPORTATION ELEMENT

A. Introduction

As part of the EO418 Program, the Montachusett Regional Planning Commission (MRPC) prepared a scope of work for the Town of Ashburnham to conduct a comprehensive traffic engineering investigation of the operational conditions of the intersections of Main Street (Route 12)/Central Street (Route 101S), Main Street (Route 12)/Water Street (Route 101N) including possible alternatives to rerouting Route 101 through the town center and additionally, a trail plan that can be utilized by the Town in the development of multi-purpose trails within the community. Figure 1 outlines the study area for this report.

Figure 1 – Study Area



B. TRAFFIC ENGINEERING INVESTIGATION

1. Overview of Analyses

a) Operational Analyses

Operational conditions at each intersection were assessed based on the traffic flow that occurs during the afternoon peak (i.e., highest-volume) hour of a typical weekday. Analyses of current conditions were based on traffic data collected in 2002 and 2003. For analyses of future (i.e., 2010) conditions, a regional traffic growth factor of 1.77% per year (based on trends in traffic volumes recorded in the Montachusett region) was used to predict future volumes.

The level of service (LOS) of an intersection or road segment represents the quality of traffic flow and is used to assess the operation of that facility. LOS analyses are based on the methods in the *Highway Capacity Manual (2000)*. LOS is defined differently for each type of facility, such as an unsignalized intersection, signalized intersection, two-lane road, or multi-lane road. For intersections, the LOS is defined by the average amount of delay experienced by a vehicle at the intersection due to the traffic controls (i.e., signs or signals). Usually each approach is assessed independently, since the LOS of the major and minor approaches may differ greatly. Table 1 summarizes the LOS definitions for intersections controlled by STOP signs and those controlled by traffic signals.

Table 1 - LOS Definitions for Intersections

LOS	*Average Control Delay (s per vehicle)*	
	Stop-Controlled	*Signalized*
A	<10.0	<10.0
B	10.1 – 15.0	10.1 – 20.0
C	15.1 – 25.0	20.1 – 35.0
D	25.1 – 35.0	35.1 – 55.0
E	35.1 – 50.0	55.1 – 80.0
F	>50.0	>80.0

When evaluating alternatives, LOS values and average control delay were estimated for each alternative and compared. Intersections were also evaluated for possible signalization. The *Manual of Uniform Traffic Control Devices* contains warrants for installation of traffic signals. If an intersection meets the criteria of at least one of the warrants, installation of a signal may be appropriate. These warrants, which are reprinted in the Appendix C of this report, include criteria such as minimum volumes, peak hour delay, and accidents. Recent data (i.e., 2002-2003) were compared to the warrants to assess the appropriateness of a traffic signal under current conditions.

b) Safety Analyses

Safety of the intersections was assessed by identifying relevant records in the Massachusetts crash database and from the Ashburnham Police Department and examining them for trends, and by visiting the sites.

One of the most common safety problems at the intersections is inadequate sight distance from the minor road approaches. A driver stopped at an intersection needs to be able to see a certain distance in both directions along the major road in order to safely turn onto or cross the major road. This distance, known as the required intersection sight distance, is calculated as $d = 1.47vt_g$, where v is the design speed on the major road and t_g is the time gap, defined in Figures 2a and 2b (excerpted from *A Policy on Geometric Design of Highways and Streets*).

Figure 2a – Time Gap for Left Turns from a STOP Sign

Design Vehicle	Time gap(s) design speed of major road (tg)
Passenger Car	7.5
Single-unit truck	9.5
Combination truck	11.5

Note: Time gaps are for a stopped vehicle to turn right or left onto a two-lane highway with no median and grades 3 percent or less. The table values require adjustment as follows:

For multilane highways:

For left turns onto two-way highways with more than two lanes, add 0.5 seconds for passenger cars or 0.7 seconds for trucks for each additional lane, from the left, in excess of one, to be crossed by the turning vehicle.

For minor road approach grades:

If the approach grade is an upgrade that exceeds 3 percent; add 0.2 seconds for each percent grade for left turns.

Figure 2a – Time Gap for Right Turns or Crossing Maneuvers from a STOP Sign

Design Vehicle	Time gap (s) at design speed of major road (t_g)
Passenger Car	6.5
Single-unit truck	8.5
Combination truck	10.5

Note: Time gaps are for a stopped vehicle to turn right onto or cross a two-lane highway with no median and grades 3 percent or less. The table values require adjustment as follows:

For multilane highways:

For crossing a major road with more than two lanes, add 0.5 seconds for passenger cars and 0.7 seconds for trucks for each additional lane to be crossed and for narrow medians that cannot store the design vehicle.

For minor road approach grades:

If the approach grade is an upgrade that exceeds 3 percent, add 0.1 seconds for each percent grade.

2. Intersection Analysis

a) Intersection of Main Street (Route 12) and Central Street (Route 101S)

Main Street, the major road at this intersection, is a two-lane arterial running east and west, and it has no traffic control devices here. The minor road is Central Street (101S), a two-lane arterial approaching from the south, controlled by a STOP sign. Located on the southwest quadrant of the intersection are a series of small commercial establishments that generate short term parking needs. A pizza shop is situated on the southeast corner of the intersection with access available from Main Street (Route 12). To the north is a one way northbound driveway that provides access to a savings bank, liquor store/deli, and a supermarket. In addition, vehicles use this parking lot entrance for access to Memorial Drive in order to reach the police station, senior center and library.

Figure 3 – Main Street (Rt 12)/Central St (Rt 101S)

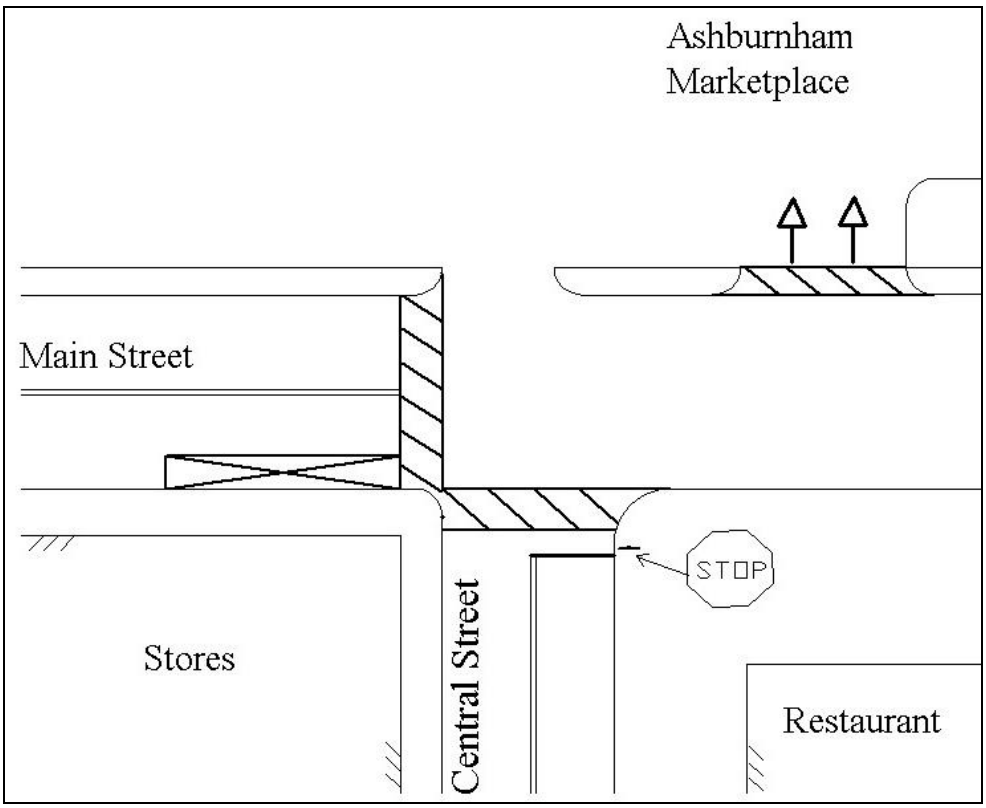


Figure 4 – Approaching the Intersection on Main Street from the West

Figure 5 – Approaching the Intersection on Main Street from the East

Figure 6 – Approaching the Intersection on Central Street from the South

(1) Operational Conditions

Turning movement volumes collected during the afternoon peak hour (4:15-5:15 PM) in 2003 are shown in Table 2, and predicted volumes for the year 2010 in Table 3. In 2003, the total volume of traffic entering the intersection during an average weekday was approximately 8,134 vehicles.

Table 2 - 2003 PM Peak Turning Movement Volumes

Approach	*Left Turn*	*Through*	*Right Turn*	*Total*
Northbound (Central St)	14	38	141	193
Eastbound (Main St)	21	129	22	172
Westbound (Main St)	144	247	39	430

Table 3 - Predicted 2010 PM Peak Turning Movement Volumes

Approach	*Left Turn*	*Through*	*Right Turn*	*Total*
Northbound (Central St)	16	43	159	218
Eastbound (Main St)	24	146	25	195
Westbound (Main St)	163	279	44	486

Table 4 - 2003 And 2010 PM Peak LOS And Delay

Approach	*LOS*		*Delay (s per vehicle)*	
	2003	*2010*	*2003*	*2010*
Northbound (Central St)	C	D	19.5	28.5
Eastbound (Main St)	A	A	7.9	8.0
Westbound (Main St)	A	A	7.9	8.1

During the afternoon peak hour, given the volumes shown in Table 2, the Main Street approaches both have an LOS of A, which is the best possible value; the Central Street approach has an LOS of C, which is acceptable. For the predicted traffic flow in 2010, the Main Street approaches would still have an LOS of A, and the Central Street approach would decrease to LOS D, which represents less acceptable delays.

(2) Safety Conditions

In 1999-2001, about five crashes occurred at this intersection. Only one was an angle collision, meaning a crash involving at least one turning vehicle. Three were rear-end collisions (two heading north on Central Street and one heading east on Main Street), and the other one was a single-vehicle crash. On an average weekday in 2003, about 8,134 vehicles entered the intersection. The crash rate in 2001 was approximately one crash per million vehicles entering the intersection. Refer to Appendix B for a summary of the accident data.

An examination of this intersection revealed a few potential safety problems:

- The pavement markings on the Central Street and westbound Main Street approaches are also quite faded.

- The available sight distance from the northbound approach (Central Street) is not adequate for a vehicle to safely turn left onto Main Street. The stop line is approximately twelve feet behind the edge of Main Street, and at that point the available sight distance is the distance to the first parked vehicle, as little as 66 feet. From the front of the crosswalk, which is where most vehicles seem to stop, the sight distance to the left is approximately 91 feet when vehicles are parked along Main Street. For safe left turns, the minimum sight distance recommended by *A Policy on Geometric Design of Highways and* Streets for 30-mph roads is 331 feet for passenger cars. Figure 8 shows the view to the left from Central Street.

- The radii of the intersection corners appear to be too small (or tight) for trucks traveling to and from Central Street (Route 101). The STOP sign located on the southeast corner of this intersection shows noticeable damage due to continued conflicts with larger vehicles attempting to turn right from Central Street to Main Street and is not mounted at the standard height. Refer to Figure 7. In addition, while trucks were able to make this turn, they often use all the available room on Main Street, including opposing lanes, to get through the intersection.

Figure 7 – Stop sign for Central Street (from the north)

Figure 8 – View to the Left from Central Street

- Another possible problem is the traffic conflict created by vehicles traveling almost straight across the intersection from Central Street into the one-way entrance to Ashburnham Marketplace. Figure 9 shows this entrance.

Figure 9 – Entrance to Ashburnham Marketplace

(3) Improvements

Based on the predicted traffic conditions in 2010, several alternatives were examined to improve the traffic flow on the Central Street approach. The analysis results are summarized in Table 5.

1. Alternative 1 adds a right-turn-only lane to this approach, which would decrease delays to turning traffic to less than the 2003 delay.
2. Alternative 2, installing an actuated signal, would also decrease delays to traffic approaching on Central Street but would increase delays to westbound traffic on Main Street. In 2003, the intersection met two signal warrants, as shown in Table 6, which means that installation of a traffic signal would be justified. Appendix C lists the signal warrants as described in the *MUTCD* and Appendix D contains a summary of the signal warrant analysis.

Table 5 - 2003 And 2010 PM Peak LOS And Delay

Approach	*LOS*				*Delay (s per vehicle)*			
	2003	*2010*	*2010 Alt 1*	*2010 Alt 2*	*2003*	*2010*	*2010 Alt 1*	*2010 Alt 2*
Northbound (Central St)	C	D	C	B	19.5	28.5	17.6	14.8
Eastbound (Main St)	A	A	A	A	7.9	8.0	8.0	7.0
Westbound (Main St)	A	A	A	B	7.9	8.1	8.1	18.4

Table 6 - Signal Warrant Analysis Summary

Warrant	*Criteria Met?*
1 (Eight-Hour Vehicular Volume)	Yes
2 (Four-Hour Vehicular Volume)	Yes
3 (Peak Hour)	No
4 (Pedestrian Volume)	No
5 (School Crossing)	No
6 (Coordinated Signal System)	No
7 (Crash Experience)	No
8 (Roadway Network)	No

The sight distance problem has already been addressed somewhat by prohibiting parking on the eastbound approach of Main Street within 50 feet of the intersection. It could be improved by prohibiting parking further along the approach. In order to achieve the required sight distance, the south side of Main Street would have to be clear of parked cars for approximately 330 feet west of the intersection. This essentially eliminates on street parking in this area.

The existing STOP sign should be replaced by a new one, installed at the correct height. According to the most recent *Manual on Uniform Traffic Control Devices* (Section 2A.18), a roadside sign located where parking or pedestrian movements occur shall have seven feet of clearance between the pavement and the bottom of the sign. The sign should also be offset at least six feet from the edge of the pavement (Section 2A.19). Also, the faded pavement markings should be repainted.

The radius of the right turn from Central Street to Main Street should accommodate the trucks that travel on Route 101 through Ashburnham. Table 7, excerpted from *A Policy on Geometric Design of Highways and Streets*, shows the design values for a 90-degree turn at an intersection to allow for various vehicles.

Table 7 - Curve Radii For Various Design Vehicles At A 90-Degree Turn.

Design vehicle	*Simple curve radius (ft)*	*Simple curve radius with taper*		
		Radius (ft)	*Offset (ft)*	*Taper (H:V)*
Passenger car	30	20	2.5	10:1
Single-unit truck	50	40	2.0	10:1
WB-40 (46' semi)	--	45	4.0	10:1
WB-50 (55' semi)	--	60	4.0	15:1

To address the driveway issue, the one-way entrance to Ashburnham Marketplace could be eliminated and the existing two-lane exit just west of the town hall (shown in Figure 10) could be converted to a combined entrance and exit. The current exit is approximately 26 feet wide, so it could accommodate bidirectional traffic. Another solution would be to add a left-turn lane from Main Street into the entrance driveway.

Figure 10 – Exit Near the Town Hall

b) Intersection of Main Street (Route 12) and Water Street (Route 101N)

Main Street is the major road at this intersection as well. It is a two-lane arterial running east and west, with no traffic control devices at the intersection. Water Street (101N) is a two-lane arterial approaching from the north and is controlled by a STOP sign. From this intersection, Water Street runs north for a short distance where it then becomes Ashby Road and continues north until it intersects with Route 119 in northern Ashburnham. A triangular traffic island is located on the Water Street approach and divides and channelizes left and right-turn lanes. The Water Street approach is on a downgrade of approximately 2 to 3 percent. The Route 12 eastbound approach has a downgrade of approximately 5 percent into the intersection. Residences occupy the northeast and southern sections of the intersection. The town library is situated on the northwest corner of the intersection. Figure 11 is a sketch of the intersection, and Figures 12 through 14 show the three approaches.

Figure 11 – Main Street (Route 12) and Water Street (Route 101N)

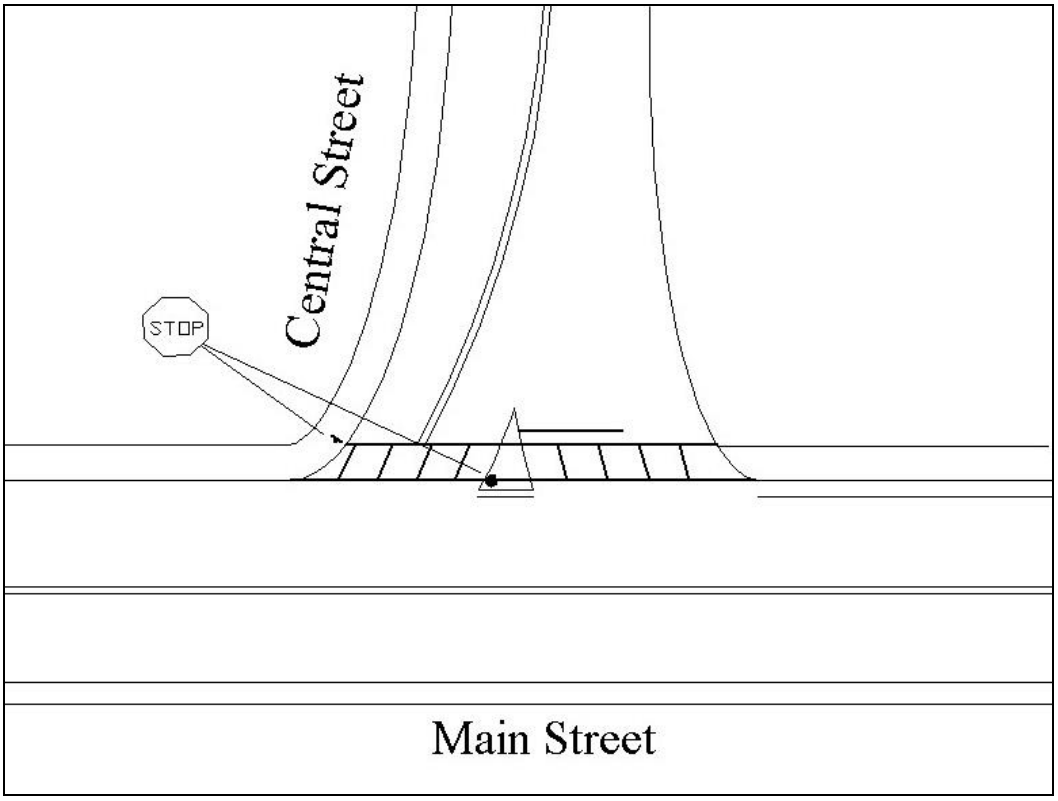


Figure 12 – Approaching Intersection on Main Street from the West

Figure 13 – Approaching Intersection on Main Street from the East

Figure 14 – Looking North at the Water Street Approach

(1) Operational Conditions

Turning movement volumes collected during the afternoon peak hour (4:30-5:30 PM) in 2003 are shown in Table 8, and predicted volumes for the year 2010 in Table 9. In 2003, the total volume of traffic entering the intersection on an average weekday was approximately 7,866 vehicles.

Table 8 - 2003 PM Peak Turning Movement Volumes

Approach	*Left Turn*	*Through*	*Right Turn*	*Total*
Southbound (Water St)	28	-	104	132
Eastbound (Main St)	103	202	-	305
Westbound (Main St)	-	299	33	332

Table 9 - Predicted 2010 PM Peak Turning Movement Volumes

Approach	*Left Turn*	*Through*	*Right Turn*	*Total*
Southbound (Water St)	32	-	118	150
Eastbound (Main St)	116	228	-	344
Westbound (Main St)	-	338	37	375

During the afternoon peak hour, given the volumes shown in Table 8, the Main Street approaches both have an LOS of A; the Water Street approach has an LOS of B, which is good. For the predicted traffic flow in 2010, the LOS of each approach would remain the same, although the delays would increase slightly. Refer to Table 10.

(2) Safety Conditions

From the information obtained from the Massachusetts Highway Department Crash database, no accidents could be definitively associated with this intersection. Sight distance appears to be adequate from the front of the crosswalks on Water Street.

An examination of this intersection revealed a few potential safety problems:

- A utility pole located on the uncurbed island can also present a hazard to vehicles.
- The layout of the island and pavement markings along Water Street approaching the intersection were deficient which can cause confusion to drivers.

(3) Improvements

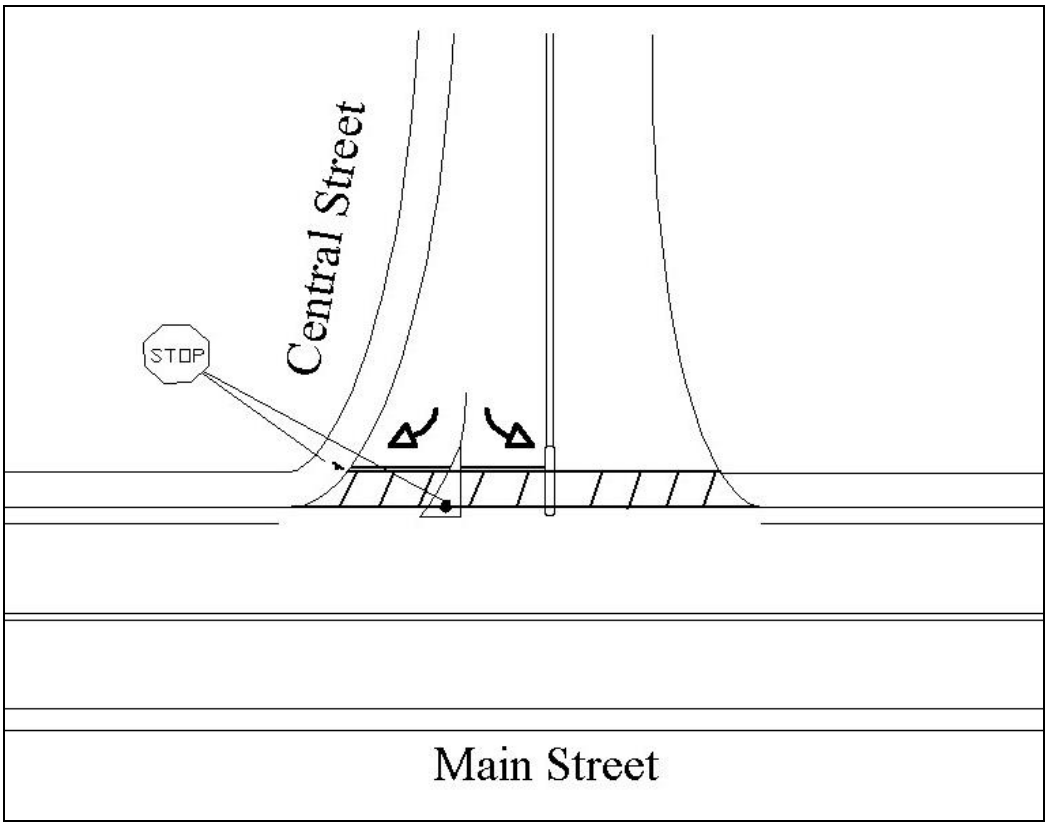
The analysis results are summarized in Table 10. A signal warrant analysis showed that the intersection does not meet any of the signal warrants in the *MUTCD* under current conditions. Operationally this intersection performs well, i.e. delays and capacity are not a problem. However, the geometrics of the crossing are somewhat confusing and sub par. Based upon the assumption that the safe and efficient operation of this intersection is of importance, the following alternative has been developed:

1. Alternative 1 would be the reconstruction of the intersection into a more traditional "T" intersection by eliminating the triangular island on Water Street. The layout of the intersection could be improved by changing the markings and the island to provide one right-turn and one left-turn lane on the Water Street approach and one lane entering Water Street from Main Street. The recommended layout is shown in Figure 15. Also, the utility pole on the existing island should be removed or relocated away from traffic.

Table 10 - 2003 And 2010 PM Peak LOS And Delay

Approach	*LOS*		*Delay (s per vehicle)*	
	2003	*2010*	*2003*	*2010*
Southbound (Water St)	B	B	13.0	14.4
Eastbound (Main St)	A	A	8.4	8.6
Westbound (Main St)	A	A	-	-

Figure 15 – Alternative Layout for Main Street (Route 12)/Water Street (Route 101N)


Central Street
STOP
Main Street

3. Rerouting of Route 101

With the current configuration of Route 101, traffic following Route 101 must turn right onto Main Street (Route 12) and then turn left onto Central or Water Street, depending on the direction of travel. This leads to high turning volumes as well as high traffic volumes on the joint 12/101 section. Because of this situation, the town requested that a rerouting of Route 101 through the town center be examined. Based upon a review of the current streets in and around the town center, a number of potential alternative routes were identified and evaluated. The following section describes these alternatives as well as issues or problems related to their potential use.

Please refer to Figures 52 to 55 regarding the alternatives, their layouts and impacts.

a) Alternatives

(1) Alternative 1

Route – Route 101 from the south along Central Street to School Street, left onto Main Street, north onto Chapel Street then back onto Water Street (Route 101)

Issues – Inadequate pavement widths on School Street and Chapel Street; Cushing Academy sits astride School Street with significant pedestrian activity; School Street may become Cushing Academy property thereby eliminating this road as an option; abutting land uses on Chapel Street and Main Street (in the vicinity) include churches which have on street and lot parking issues; intersections of Central Street/School Street, School Street/Main Street, Main Street/Chapel Street and Chapel Street/Water Street have deficiencies that need to be addressed in order to handle a significant increase in car and truck traffic volumes; sight distance and grade problems exist at all of the identified intersections.

Figure 16 – Central Street/School Street Looking North

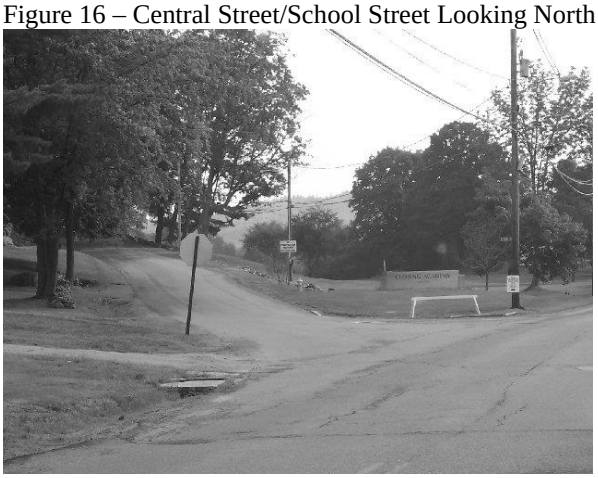


Figure 17 – Main Street/School Street Looking West

Figure 18 – Main Street/Chapel Street Looking East

Figure 19 –Chapel Street Looking South

Figure 20 – Water Street/Chapel Street Looking West

Figure 21 – Water Street/Chapel Street Looking East

(2) Alternative 2

Route – Route 101 from the south along Central Street to Pleasant Street, across Main Street to Lawrence Street, north to Chapel Street then back onto Water Street (Route 101)

Issues – Inadequate pavement widths on Pleasant Street and Lawrence Street; Cushing Academy abuts Pleasant Street generating pedestrian activity; residential properties abut Pleasant and Lawrence Streets; convenience store and commercial activity at the Main Street/Pleasant Street intersection impacts performance of the crossing; on-street parking is an additional issue in the area; intersections of Central Street/Pleasant Street, Pleasant Street/Main Street/Lawrence Street, Lawrence Street/Chapel Street and Chapel Street/Water Street have deficiencies that need to be addressed in order to handle a significant increase in car and truck traffic volumes; sight distance and grade problems exist at all of the identified intersections.

Figure 22 – Central Street/Pleasant Street Looking West

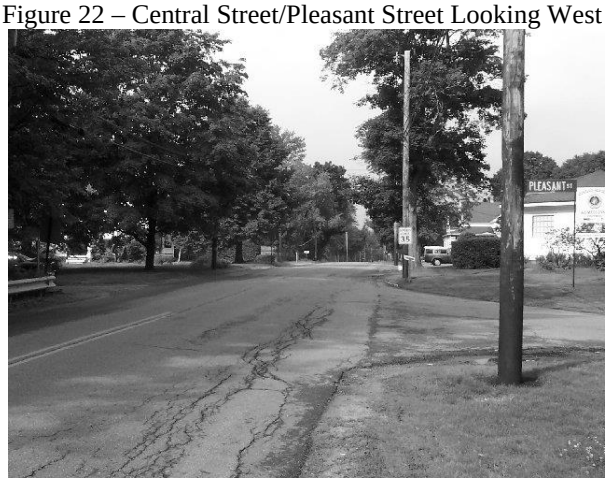


Figure 23 – Pleasant Street Looking North

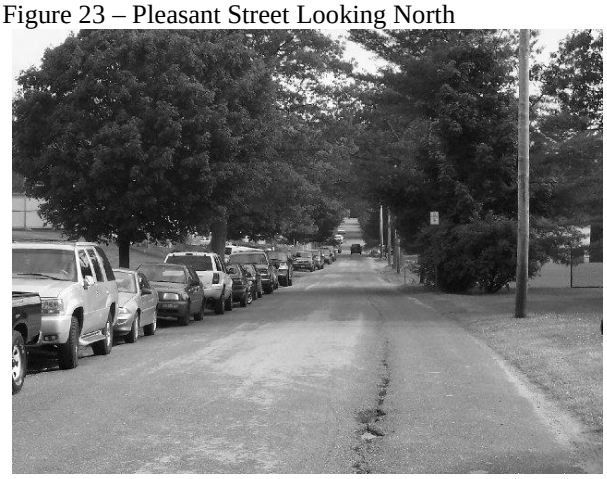


Figure 24 – Main Street/Pleasant Street Looking West

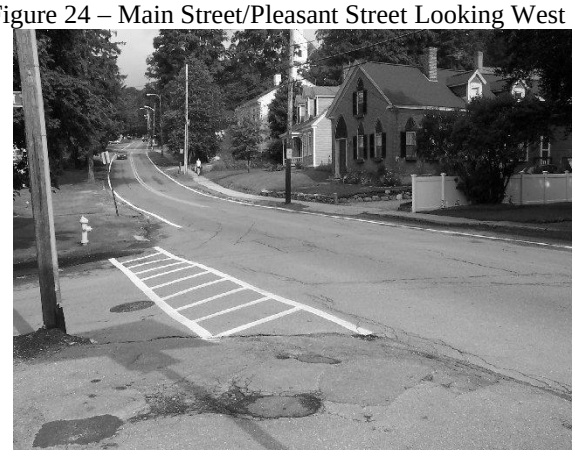


Figure 25 – Main Street/Lawrence Street Looking North

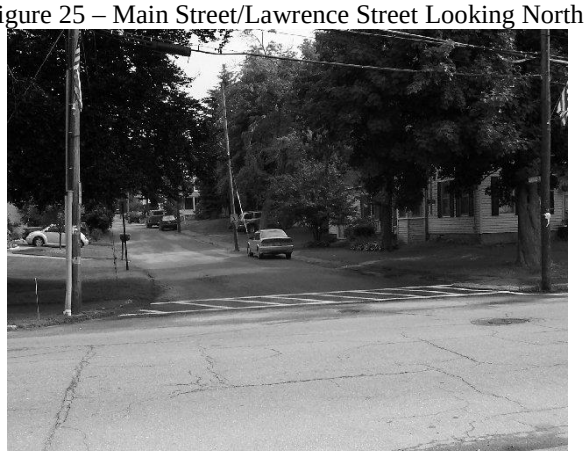


Figure 26 – Lawrence Street Looking South

Figure 27 – Lawrence Street/Chapel Street Looking West

(3) Alternative 3

Route – Route 101 from the south along Center Street, north onto Corey Hill Road, across Main Street (Route 12) onto Lashua Road, across High St/Lake Road onto Hastings Road, to Stowell Road then back onto Route 101 (Ashby Road)

Issues – Intersection of Central Street/Williams Road/Corey Hill Road current area of concern due to sight distance issues and pavement widths; additional pavement markings have been added to try to better guide vehicles thru the crossing; additional measures such as a traffic signal may be needed due to car and truck volumes; intersection of Main Street (Route 12)/Corey Hill Road/Lashua Road also has sight distance issues as well as speed issues along Main Street; intersection of Lashua Road/High Street/Lake Street/Hastings Road has sight distance and grade issues as well as geometric alignment problems that impact the efficient movement of traffic through the crossing (i.e. from Lashua Road across High Street/Lake Road to Hastings Road); Hastings Road and Stowell Road have inadequate pavement widths throughout; the intersection of Ashby Road (Route 101)/Stowel Road has geometric/grade and sight distance issues that impact impacts traffic movements; Hastings Road also abuts a cemetery with historic significance. This route is a significant detour from the current Route 101 layout and would be unattractive to drivers due to the grades and mileage.

Figure 28 – Central Street/Corey Hill Road/Williams Road Looking East

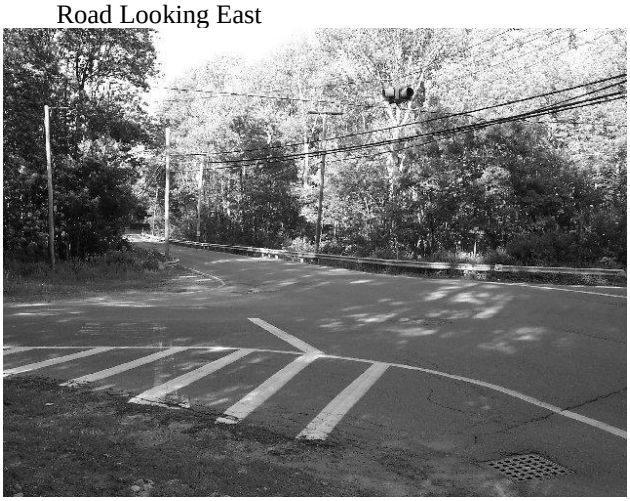


Figure 29 – Main Street/Corey Hill Road/Lashua Road Looking East

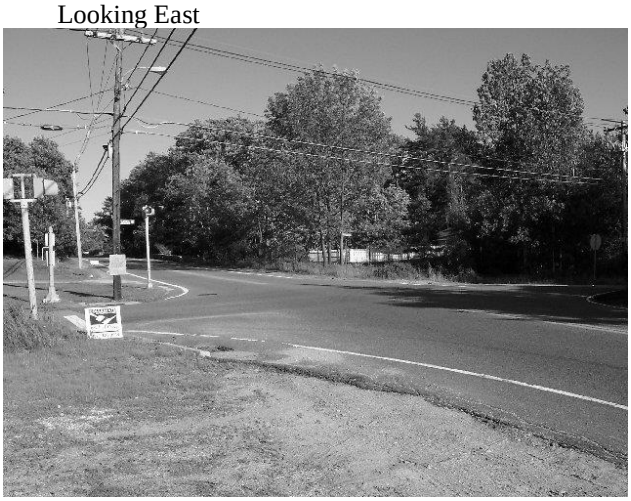


Figure 30 – High Street/Lashua Road/Hastings Road Looking West

Figure 31 – Hastings Road at High Street Looking East

Figure 32 – Hastings Road Near Marshall Mills Road Looking North

Figure 33 – Hastings Road/Stowell Road Looking North

Figure 34 – Ashby Road (Rt 101)/Stowell Road Looking East

Figure 35 – Ashby Road (Rt 101)/Stowell Road Looking North

(4) Alternative 4

Route – Route 101 from the south along Central Street to Puffer Street, to Maple Avenue, north to Main Street (Route 12), west on Main Street to Water Street (Route 101)

Issues – Inadequate pavement widths on Puffer Street and Maple Avenue; Puffer Street and Maple Avenue provide direct access to Bickford (Marden) Little League Field which generates pedestrian activity as well as parking issues at and around the Puffer Street/Maple Avenue intersection; residential properties abut both roads; intersections of Central Street/Puffer Street and Puffer Street/Maple Avenue are small tight 90 degree angled crossings that restrict vehicle movements and need significant upgrading in order to handle increased car and truck traffic; intersection of Main Street (Route 12)/Maple Avenue would now bring Route 101 traffic to a three legged intersection east of the current Main Street/Water Street (Route 101N) intersection; this area has significantly less commercial activity than the current Central Street intersection but issues would still remain relative to pavement widths and potential turning lanes.

Figure 36 – Central Street/Puffer Street Looking South

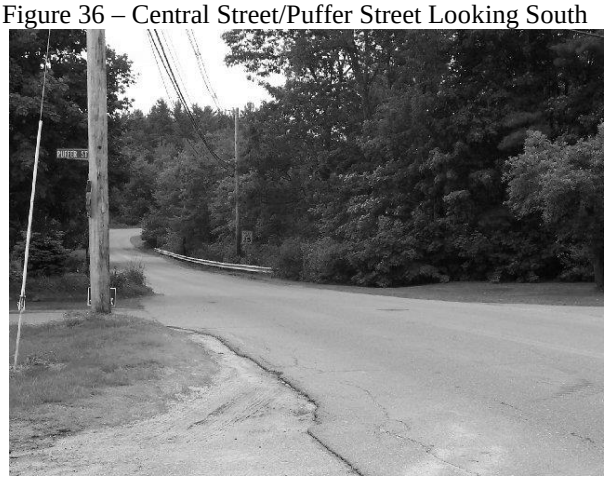


Figure 37 – Puffer Street/Maple Avenue Looking East

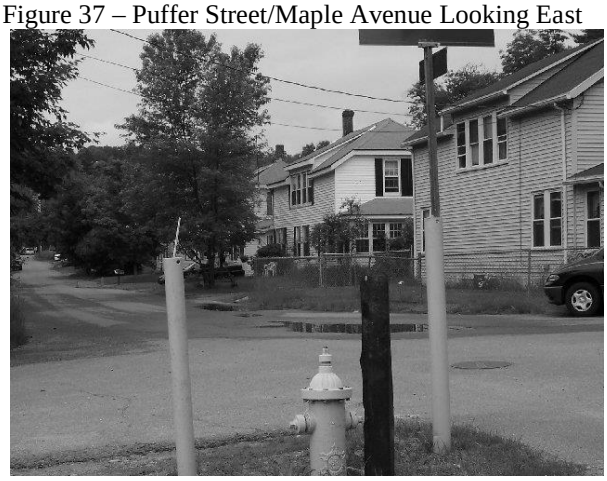


Figure 38 – Maple Avenue Looking South

Figure 39 – Main Street (Rt 12)/Maple Avenue Looking East

(5) Alternative 5

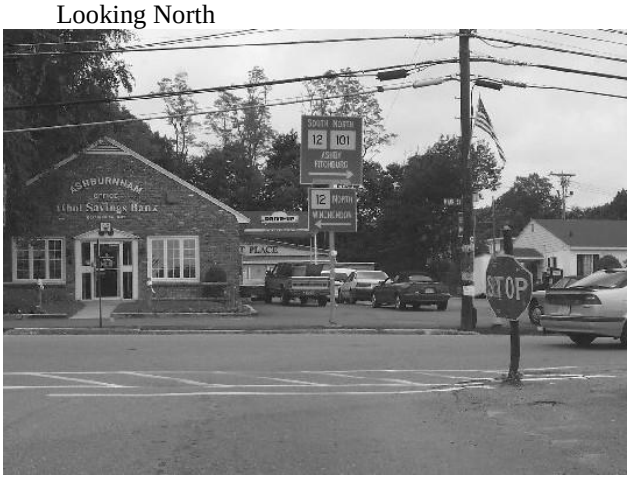
Route – Same as Alternative 3 until the intersection of Corey Hill Road and Main Street (Route 12). The route would then turn east on Main Street to the downtown and the existing Main Street/Water Street (Route 101) intersection.

Issues – As stated in Alternative 3, intersection of Central Street/Williams Road/Corey Hill Road current area of concern due to sight distance issues and pavement widths; additional pavement markings have been added to try to better guide vehicles thru the crossing; additional measures such as a traffic signal may be needed due to car and truck volumes; intersection of Main Street (Route 12)/Corey Hill Road/Lashua Road also has sight distance issues as well as speed issues along Main Street; utilizes existing Route 12 would result in additional traffic, both passenger car and truck, through this stretch of Main Street (from Central Street to Corey Hill Road/Lashua Road) which has grade and geometric issues between Pleasant, Lawrence, School and High Streets.

Figure 40 – Central Street Approaching Main Street

Figure 41 – Pleasant Street Looking North

Looking North



(6) Alternative 6

Route – One way street pattern with northbound only for Central Street from the Pleasant Street/Central Street intersection to Main Street (Route 12) and southbound traffic on Pleasant Street from Main Street to Central Street.

Issues – This would eliminate the left turn traffic from Main Street westbound at the current Main Street/Central Street intersection and shift it to the Main Street/Pleasant Street crossing. This option does not address the problems present at the Main Street/Central Street intersection for the northbound Central Street traffic, i.e. sight distance, geometric deficiencies and access to the bank/deli/market parking lot.

Figure 42 – Main Street Approaching High Street Looking East

Figure 43 – Main Street Approaching Street Road Looking East

(7) Alternative 7

7A - Route – New road connection from the area of the Central Street/Willard Street intersection north to a new four way intersection with the existing Main Street (Route 12)/Water Street(Route 101N) intersection

Issues – New road would impact approximately 3-4 houses/buildings between the Central Street/Willard Street intersection area and Main Street opposite the existing Water Street intersec-

tion. Exact properties impacted would depend upon final road design, however parcels along Central Street (between Willard Road and Puffer Street), north of Puffer Street and along Main Street (south of the intersection of Main Street/Water Street) would be affected. Refer to Figure 53. The Ashburnham Highway Department and its associated yard would also be directly impacted. In addition, the following environmental features would be impacted by this route:

1. Phillips Brook. A crossing would be needed.
2. Wetlands surrounding Phillips Brook east of Central Street and south of Puffer Street. Refer to Figure 55.
3. 100 Year FEMA (Federal Emergency Management Agency) Flood Zone around Phillips Brook. Refer to Figure 54.
4. 100 and 200 Foot MA DEP (Department of Environmental Protection) River Protection Act Buffers along Phillips Brook. Refer to Figure 54.
5. MRIP (Massachusetts Resource Identification Program) Natural Land Riparian and 100 Meter Riparian Corridors surrounding Phillips Brook. Refer to Figure 55.

7B - Route – New road connection from the area of the Central Street/Puffer Street intersection north to a new four way intersection with the existing Main Street (Route 12)/Water Street(Route 101N) intersection

Issues – New road would impact approximately 1-2 houses/buildings between the Central Street/Willard Street intersection area and Main Street opposite the existing Water Street intersection. As with Alternative 7A, the exact properties impacted would depend upon final road design. The Ashburnham Highway Department property would be impacted to a greater extent than Alternative 7A do to the potential road layout. Refer to Figure 55. The new route could begin at the intersection of Central Street/Puffer Street and immediately enter the Highway Department property. Impacts to existing structures and storage areas would need to be discussed as part of the design process. Environmental impacts would be significantly less than those associated with Alternative 7A. They would include:

1. MRIP 100 Meter Riparian Corridor surrounding Phillips Brook. Refer to Figure 55.

Figure 44 – Central Street Near Willard Street Looking East

Figure 45 – Puffer Street Looking Northeast at Properties Likely Impacted by Alternative 7A

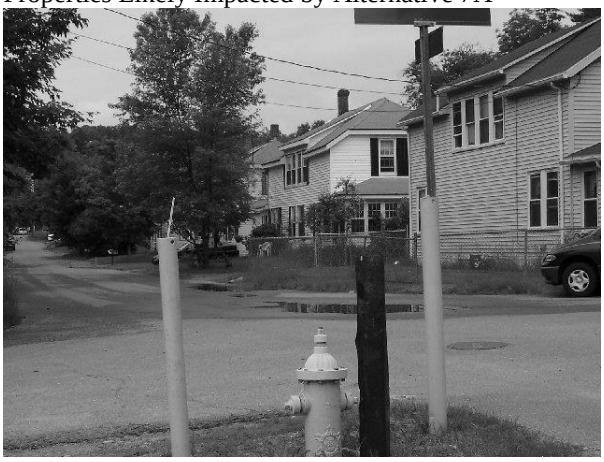


Figure 46 – Central Street & Puffer Street Looking Northeast at DPW Property

Figure 47 – DPW Property Looking Northeast at Sand Storage Area

Figure 48 – DPW Property Looking East at Storage/Garage

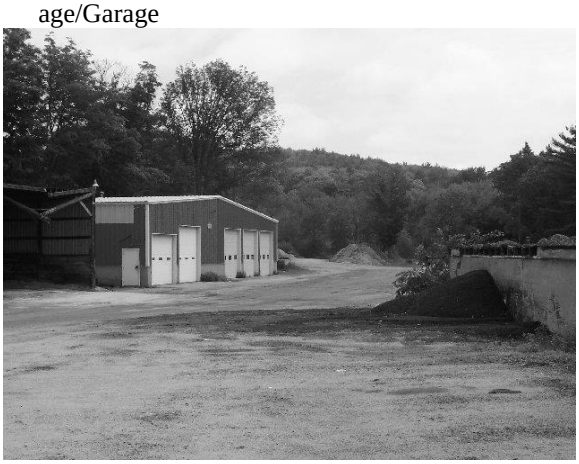


Figure 49 – DPW Property Looking Northeast at Sand Storage and Water Street (Thru Trees)

Figure 50 – DPW Property Looking East at Water Street (Middle of Picture)

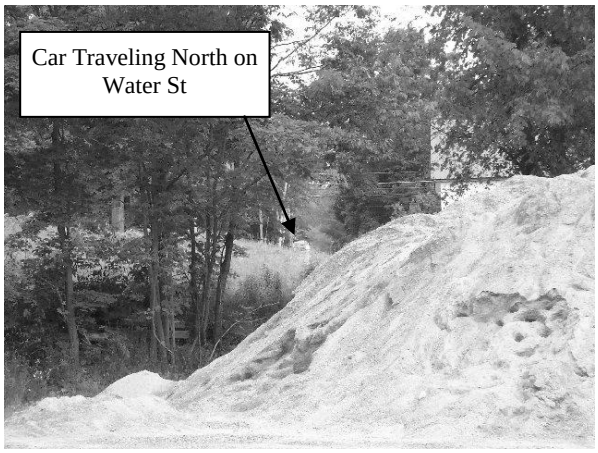
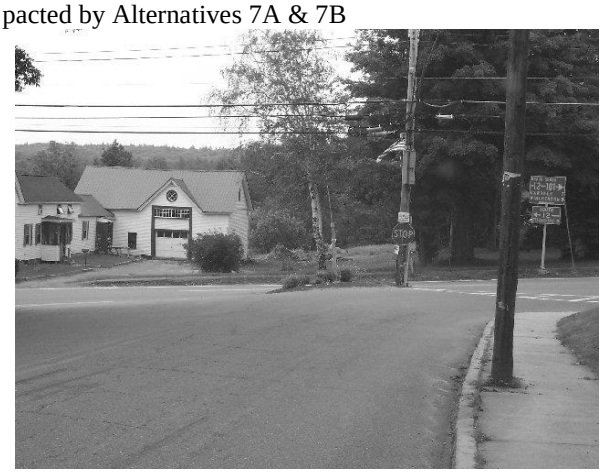


Figure 51 – Water Street Looking South at Main Street Towards DPW and Properties Likely Impacted by Alternatives 7A & 7B



7C - Route – New road connection from the area of the Central Street/Puffer Street intersection north to a across the DPW property to Maple Avenue north to Main Street (Route 12), west on Main Street to Water Street (Route 101)

Issues – New road would impact only the Ashburnham Highway Department, however properties on Maple Avenue at Main Street (Route 12) would likely be impacted due inadequate pavement widths on Maple Avenue; as with Alternative 4, intersection of Main Street (Route 12)/Maple Avenue would now bring Route 101 traffic to a three legged intersection east of the current Main Street/Water Street (Route 101N) intersection; this area has significantly less commercial activity than the current Central Street intersection but issues would still remain relative to pavement widths and potential turning lanes; in addition, sight distance issues are present for exiting vehicles looking east on Route 12. Refer to Figure 55. The new route could begin at the intersection of Central Street/Puffer Street and immediately enter the Highway Department property. Impacts to existing structures and storage areas would need to be discussed as part of the design process. Environmental impacts would be significantly less than those associated with Alternative 7A but slightly more than Alternative 7B. Maple Avenue is an existing road within some identified environmental areas. They would include:

1. MRIP 100 Meter Riparian Corridor surrounding Phillips Brook. Refer to Figure 55.
2. 200 Foot MA DEP (Department of Environmental Protection) River Protection Act Buffers along Phillips Brook. Refer to Figure 54.

Alternatives 1 – 5 and 7A, 7B and 7C have the following added issue:

- In order for the re-routing of Route 101 to be effective, current vehicles would need to be discouraged from utilizing Central Street to access Main Street (Route 12). If these vehicles are not redirected to the new route quickly and easily there would be no advantage to this alternate road. Eliminating direct access to Central Street for the segment that connects directly with Main Street would be an important issue to resolve, otherwise these alternatives would likely be of little benefit.

b) Conclusions & Recommendations

To improve the traffic flow and safety conditions in the area of interest, the following improvements are recommended:

(1) Intersections

(a) Main Street (Route 12) and Central Street (Route 101S)

- Improve roadway geometrics through:
  - An additional right-turn-only lane to the Central Street approach
  - An increase of the radius of the right turn lane to accommodate trucks.
  - Replacement of the STOP sign with a new one, at the correct height and lateral offset The current STOP sign located at the Central Street approach needs further reinforcement to prevent continued damage. Curbing along this corner would help somewhat to protect the sign.
  - Repainting of the pavement markings.

Additional reinforcement of the traffic control situation at this crossing could be through the use of flashing warning beacons.

Improvements to the sight distance can be effected only by the elimination of parking within 260 feet of the southwest corner of the intersection. The prohibition currently in place has improved the situation to a limited degree.

Other options for this intersection include:

- Installation of a traffic signal. Warrants are met at the location to justify the installation of a signal. This would result in a safer situation for traffic exiting Central Street and depending upon final design provide better control of access to the parking lot located north of the intersection. However, Main Street traffic would likely see increases in delays.

- Eliminate the existing entrance to Ashburnham Marketplace and change the existing two-lane exit to a combined entrance and exit.

- Consider adding a left-turn lane for traffic entering Ashburnham Marketplace from Main Street east-bound.

(b) Main Street (Route 12) and Water Street (Route 101N)

- Redesign of the intersection geometrics to a traditional "T" crossing thereby eliminating the triangular island. This would result in better driver awareness and comfort regarding the traffic flow patterns as well as any right-of-way confusion.
- Outside of the redesign of this crossing, additional and/or upgrading of the STOP signs on the Water Street approaches as well as appropriate pavement markings should be implemented. Reflective signs or posts on the island in order to properly delineate the general layout and the vehicular travel paths should be installed. Additional reinforcement of the traffic control situation at this crossing could also be accomplished through the use of flashing warning beacons.
- Remove the utility pole from the existing island or relocate it away from traffic.

(2) Rerouting of Route 101

Of the alternatives examined, Alternative 7B would appear to be the most feasible. This is due to its limited environmental impacts compared to Alternatives 7A and 7C and its ability to directly address the problems associated with the current Route 12/Route 101 intersections. Alternatives 1-6 impact current predominately residential streets and would in many cases require widening. In addition, all of the intersections involved in these routes would need to be re-designed and upgraded to accommodate the increased traffic. Although Alternative 7B does have impacts to several properties, most notably the current Ashburnham Highway Department, these are less than those associated with all of the other alternatives (except possibly Alternative 7C). Each alternative must address the issue of limiting access to the current Main Street/Central Street intersection in order to effective. If the town wishes to proceed with the re-routing option, consideration should still be given to the recommendations for the Main Street/Central Street and Main Street/Water Street intersections due to the time period it would take to see any new route designed and constructed.

Due to the magnitude of the re-routing recommendation as well as the Main Street/Central Street and Main Street/Water Street intersections improvements, coordination with MassHighway is strongly recommended. Reconstruction of the intersection geometrics and construction of a new Route 101 should be eligible for state or federal funding assistance, therefore requests need to go through MassHighway. A synopsis of the project request and implementation process to seek state funding assistance for a roadway project is included in Appendix E.

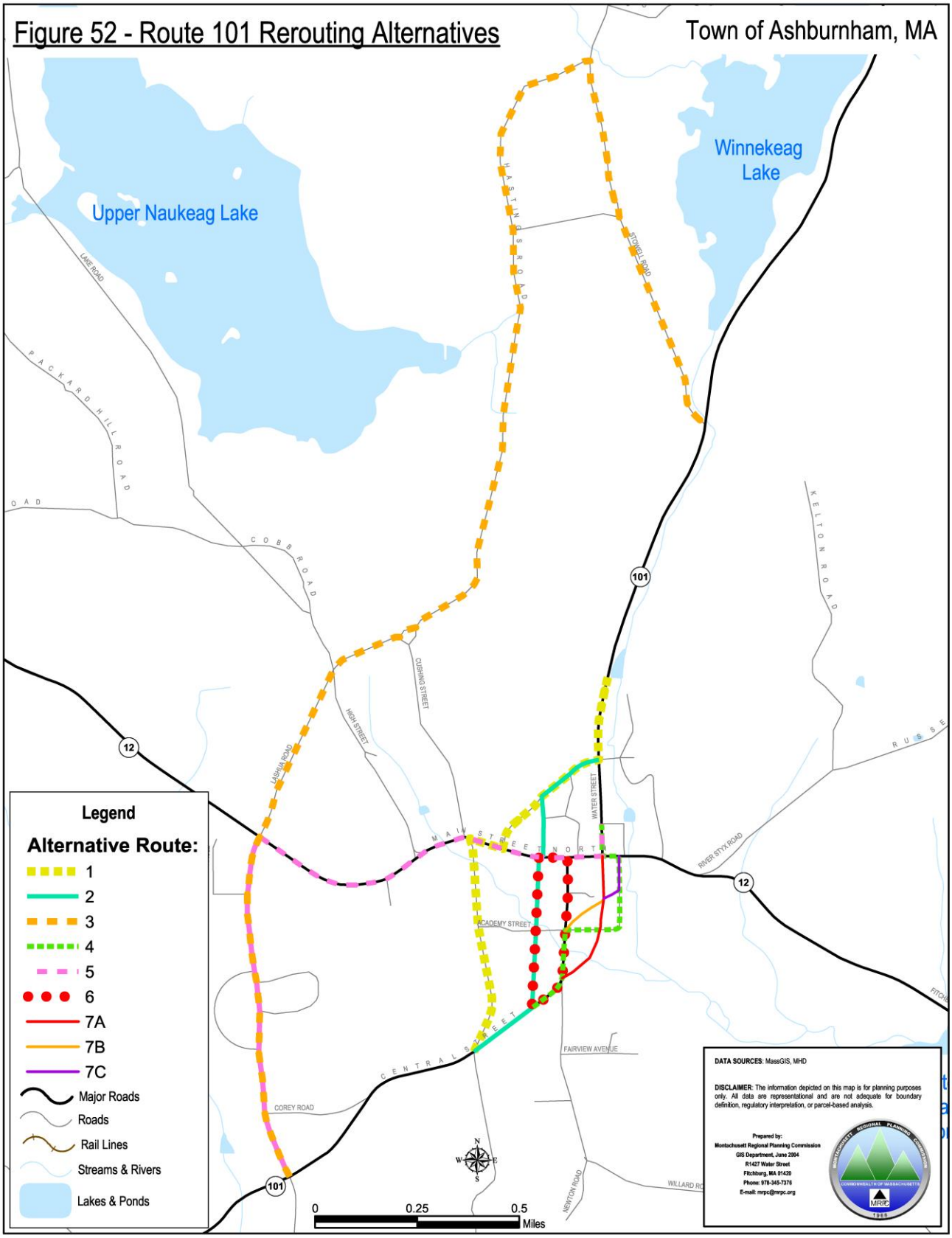


Figure 52 - Route 101 Rerouting Alternatives
Town of Ashburnham, MA
Upper Naukeag Lake
Winnekeag Lake
Legend
Alternative Route:
1
2
3
4
5
6
7A
7B
7C
Major Roads
Roads
Rail Lines
Streams & Rivers
Lakes & Ponds
0
0.25
0.5
Miles
DATA SOURCES: MassGIS, MHD
DISCLAIMER: The information depicted on this map is for planning purposes only. All data are representational and are not adequate for boundary definition, regulatory interpretation, or parcel-based analysis.
Prepared by:
Montachusett Regional Planning Commission
GIS Department, June 2004
R1427 Water Street
Fitchburg, MA 01420
Phone: 978-345-7376
E-mail: mrpc@mrpc.org
HASTINGS ROAD
STOWELL ROAD
LAKE ROAD
PACKARD HILL ROAD
COBB ROAD
CUSHING STREET
HIGH STREET
LASHUA ROAD
MAIN STREET NORTH
WATER STREET
KELTON ROAD
RIVER STYX ROAD
ACADEMY STREET
CENTRAL STREET
FAIRVIEW AVENUE
COREY ROAD
NEWTON ROAD
101
12

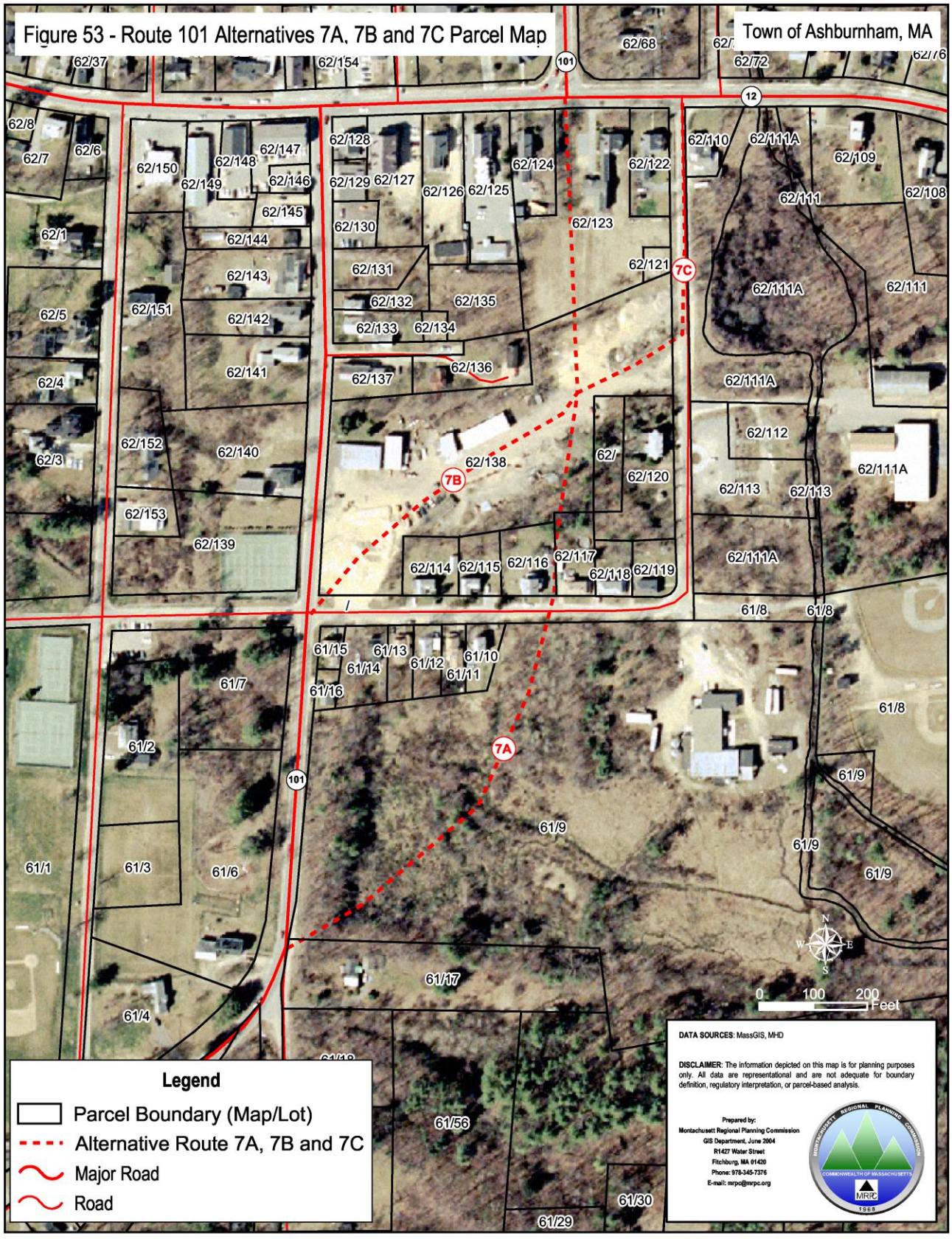


Figure 53 - Route 101 Alternatives 7A, 7B and 7C Parcel Map
Town of Ashburnham, MA
Legend
Parcel Boundary (Map/Lot)
Alternative Route 7A, 7B and 7C
Major Road
Road
DATA SOURCES: MassGIS, MHD
DISCLAIMER: The information depicted on this map is for planning purposes only. All data are representational and are not adequate for boundary definition, regulatory interpretation, or parcel-based analysis.
Prepared by:
Montachusett Regional Planning Commission
GIS Department, June 2004
R1427 Water Street
Fitchburg, MA 01420
Phone: 978-345-7376
E-mail: mrpc@mrpc.org
0 100 200 Feet
7A
7B
7C
101
12

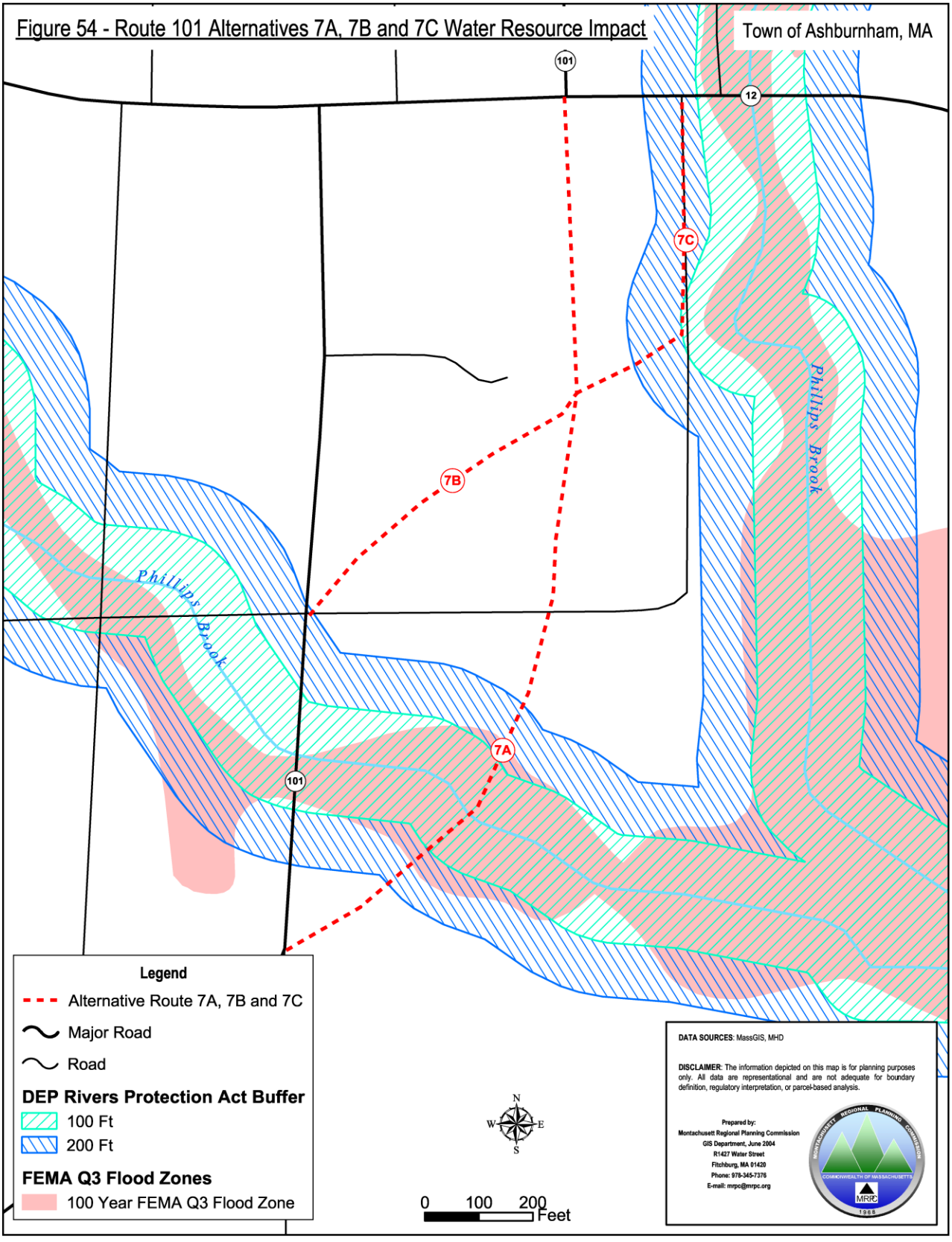


Figure 54 - Route 101 Alternatives 7A, 7B and 7C Water Resource Impact
Town of Ashburnham, MA
101
12
7C
7B
7A
Phillips Brook
Phillips Brook
101
Legend
Alternative Route 7A, 7B and 7C
Major Road
Road
DEP Rivers Protection Act Buffer
100 Ft
200 Ft
FEMA Q3 Flood Zones
100 Year FEMA Q3 Flood Zone
N
W
E
S
0 100 200 Feet
DATA SOURCES: MassGIS, MHD
DISCLAIMER: The information depicted on this map is for planning purposes only. All data are representational and are not adequate for boundary definition, regulatory interpretation, or parcel-based analysis.
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MRPC

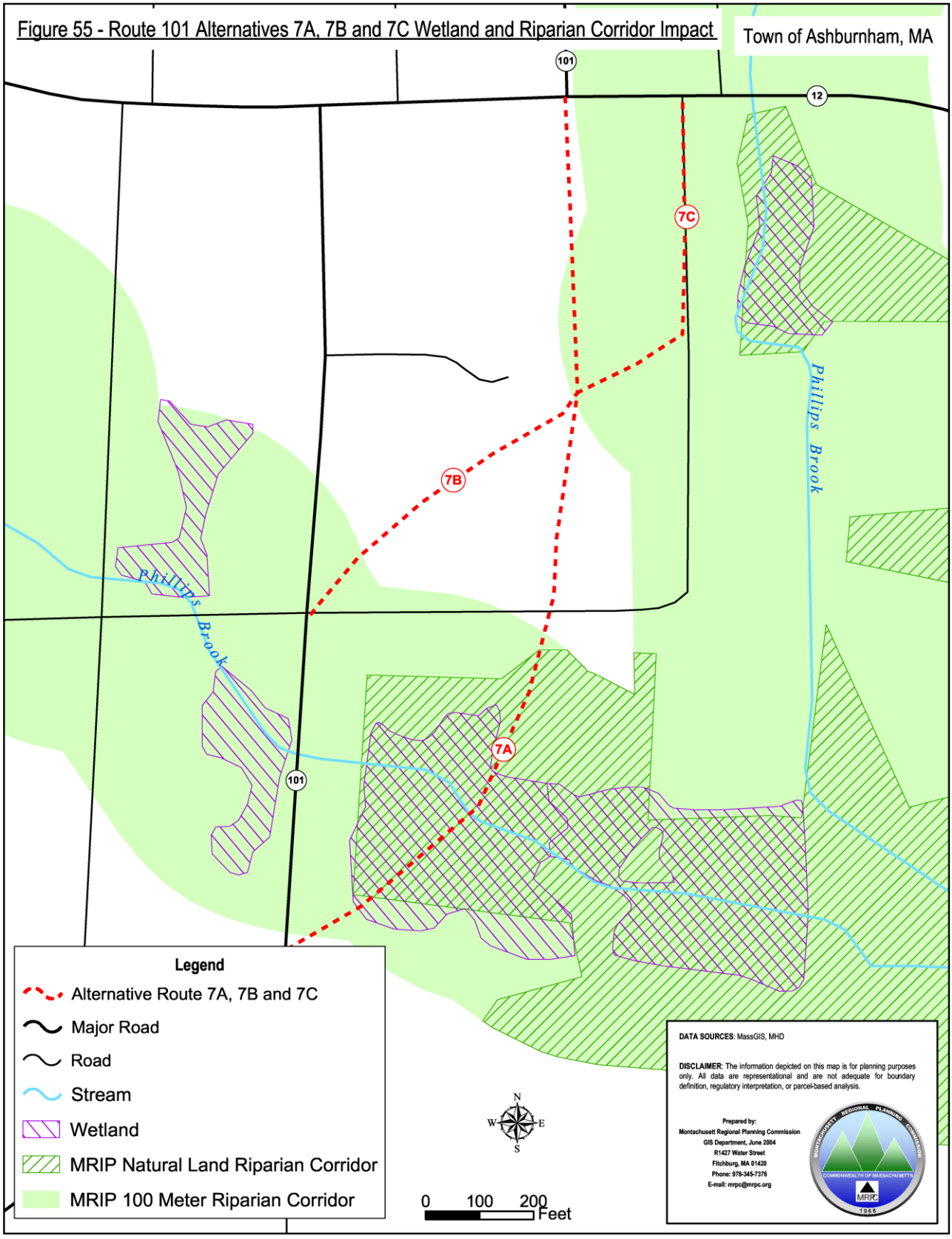
Figure 55 - Route 101 Alternatives 7A, 7B and 7C Wetland and Riparian Corridor Impact
Town of Ashburnham, MA
101
12
7C
7B
7A
Phillips Brook
Phillips Brook
101
Legend
Alternative Route 7A, 7B and 7C
Major Road
Road
Stream
Wetland
MRIP Natural Land Riparian Corridor
MRIP 100 Meter Riparian Corridor
N
W
E
S
0 100 200 Feet
DATA SOURCES: MassGIS, MHD
DISCLAIMER: The information depicted on this map is for planning purposes only. All data are representational and are not adequate for boundary definition, regulatory interpretation, or parcel-based analysis.
Prepared by:
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GIS Department, June 2004
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MRPC

C. Trail Plan

1. Introduction

This part of the transportation element is related to the development of multi-purpose trails within the town of Ashburnham. The main focus of this section is on the proposed Ashburnham Rail Trail.

As new recreational trails are developed throughout the town, many more people will benefit from additional outdoor recreation opportunities. The benefits of trails extend well beyond fitness and leisure pastimes. Trails hold tremendous potential for economic and community development.

"Across the country, trails and greenways are stimulating tourism and recreation spending. Lodging and food, horseback riding, bicycling, snowmobiling and bird watching demonstrate the economic value that trails and greenways provide to communities… Trails help improve people's health by providing safe and attractive places to be physically active and by providing alternative transportation routes that help reduce pollution from automobiles. Trails and greenways also increase the natural beauty of communities and have been show to bolster property values. " (Source: Rails-to-Trails Conservancy)

2. Trail Background Information

a) Plans

The United States

According to the New England Greenway Vision Plan "The United States has been actively increasing their trail mileage over the past three decades. The United States National Trail System hosts 14,260 miles of National Scenic Trails and 21,916 miles of National Historic Trails with a combined total of 36,176 miles of trail. Two organizations that are working hard to establish trails and have a direct impact on New England are the East Coast Greenway Alliance and the Rail-to-Trail Conservancy. There are also two significant legislative packages that impact trail building directly, the Intermodal Surface Transportation Efficiency Act (ISTEA) signed in 1991 and the Transportation Equity Act for the Twenty-first Century (TEA-21) signed in 1998." Reauthorization of the transportation legislation, i.e. the successor to TEA-21, is currently under development, however all versions being debated contain provisions that maintain funding for trails.

New England

New England's trail building efforts are leading the way for the rest of the United States. New England has approximately 7000 miles of railroad, 4000 of it is abandoned (a little more than ½ the total). Currently there are 1,023 miles of open rail trails located in New England, 133 of which are located in Massachusetts. The expected total of rail trails in New England by 2010 is 2350 miles.

New England's railroad corridors are a rich resource for creating rail trails. Rail trails are pathways that run along abandoned rail beds. They can have many different types of surfaces including asphalt and crushed stone. Rail Trails are considered multi-use trails because they can host a variety of recreation modes including biking, walking, rollerblading and horseback riding. New England's greatest potential for trail building lies within the rail corridors. (New England Greenway Vision Plan)

One of the Recommendations for securing the Massachusetts Greenway Vision (Department of Environmental Management, now known as the Department of Conservation and Recreation) was to protect and promote long-distance trail corridors as primary spines of the Massachusetts Greenway and Trail System. (For example The Midstate Trail)

Montachusett Region

Increasing concern for air quality and energy conservation is leading to renewed interest in development of adequate facilities for bicycles throughout the Montachusett region. While individual bikeway and trail projects are being implemented in some regional communities, there has been a noticeable increase in the number of bicycles around population centers and on the highways.

According to the 2003 Montachusett Regional Transportation Plan (RTP), within the Montachusett Region, several communities have worked to develop bicycle paths and/or ways. A few are currently in operation with several more planned for expansion or construction. Transportation enhancement funds have been utilized as a mechanism to implement several of these bicycle and/or pedestrian ways.

b) Ashburnham Open Space & Recreation Plan 2001

Results of the 2001 Survey for Open Space and Recreation Plan taken by Ashburnham residents

- Hiking and cross-country ski trails = #2 as the most important recreational facility needed
- Mt. Watatic and the Midstate Trail were of the most important for protection and are unique to Ashburnham
- Providing hiking and cross-country ski trails were the third and fourth priorities of the survey.
- Establishing bike trials was the fifth priority mentioned in the survey.

Goals and Objectives:

- Develop and maintain a trial system that will connect protected parcels of land and existing trails,
- Investigate the possibility of grading the old railroad beds to be used as walking and biking paths,
- Encourage future developers to set aside land for recreation and provide easements for trails,
- Publicize, map and use signage to identify existing trails.

Recommendations:

- Promote activities of bicyclists, equestrians, and hikers based on the direct user benefits of enhanced physical and mental well-being.
    - Determine trail routes that may be safely used by bicyclists, and hikers of all ages and skills.
    - Blend trails into the natural environment, which result in as little environmental disruption as Possible.
    - Provide a variety of trail experiences by locating trails of varying lengths and difficulty through diverse terrain, scenery, and points of attraction to draw users and maintain their interest.

Notes: As stated in the Natural Resources Element of this document, under *Strategies for Developing Recreational Potential* the town would like to "promote the extension of the Gardner to Winchendon rail trail through Ashburnham."

c) Bicycling

Bicycles have found a place on the highway network by default, as have pedestrians. Bicycles mixed with motor vehicle traffic can be dangerous and create traffic delays. At the same time, bicycle safety problems have increased. Also the number of bicycle-automobile accidents has increased. There is strong support from the regional communities for designated bikeways for recreational and commuting traffic. However, construction of the bikeways will encourage cycle commuting by providing a direct, separate, and safe route between the communities.

Bikeways are special routes and/or facilities established to facilitate the movement of bicycles as an energy efficient transportation and/or recreation mode of travel. There are three classifications of bikeways:

Class I A completely separated right-of-way designated for the exclusive

Bicycle Path	use of bicycles. Crossflows by pedestrians and motorists are minimized.
Class II Bicycle Lane	Restricted right-of-way designated for the exclusive or semi-exclusive use of bicycles. Through travel by motor vehicles or pedestrians are not allowed. However, vehicle parking may be allowed. Crossflows by motorists, for example, to gain access to driveways or parking facilities, is allowed, pedestrian cross-flows, for example, to gain access to parked vehicles or bus stops or associated land use, is allowed.
Class III Bicycle Route	A shared right-of-way designated as such by signs placed on vertical posts or stenciled on the pavement. Any bikeway which shares its through-traffic right-of-way with either or both moving (not parking) motor vehicles and pedestrians is considered a Class III bikeway.

3. Trails

There are very few existing trails in Ashburnham. This section will look at some of the existing and proposed trails with the main focus being on the proposed Ashburnham Rail Trail.

a) Existing & Proposed in Ashburnham (Refer to figure 56 and 57)

Ashburnham Rail Trail (Upper Millers River Bikeway)

According to the Rails-to-Trails Conservancy, a local citizen activist organization rediscovered the Ashburnham Rail-Trail and began piecing the corridor back together in June 2003. The Friends of the Rail Trail are a non-profit group that was formed as a sub-committee of the Ashburnham Conservation Trust. The Ashburnham Rail-Trail is an old Boston & Maine Railroad corridor abandoned since the 1930's. The town presently owns approximately 50% of the land located along the railroad corridor. The other 50% is still owned by the railroad company.

Phase one of this plan involves the corridor that runs approximately two miles from the B&M mainline at South Ashburnham to downtown Ashburnham. The Downtown Focus Committee hopes to convert the abandoned railroad into a multi-purpose walking and bike path between the center of town and the Post Office and the ball field about a mile distant. Phase two of the railroad runs from Route 101 in South Ashburnham to Route 12 near the Winchendon border. Later phase could connect with the North Central Pathway that now runs from Gardner to Winchendon.

An engineer has recently completed a design plan for Phase I that will determine costs for this project. The Friends of the Rail Trail are scheduled to meet with the engineer sometime in July 2004 to discuss future actions. There will also be a public meeting and a documentary the following month, which will be filmed by the local access television representative. Once design is complete additional funds and grants can be pursued for implementation. MRPC will focus the main part of this study on Phase II.

Possible Connections to other existing/proposed trails

The following are referenced in Figure 57.

In Ashburnham
- Rt.12 Corridor
- Rt. 101 Bikeway

In surrounding communities
- North Central Pathway (Winchendon)
- Rt. 202 Corridor (Winchendon)

Environmental Features:

A review of environmental information for the town of Ashburnham along the trail route shows the following:

- 4 potential vernal pools lie within close proximity to the trail. (Figure 58)
- Crosses through a Natural Land Riparian Corridor, which is defined as "natural lands" within a 100-meter corridor encompassing perennial stream and river features. These areas have remained in a natural state, potentially functioning as a corridor for select species movement, as well as additional ecological purposes. (Figure 58)
- 27 % of the trail runs through multiple wetland areas. (Figure 58)
- 29% crosses through a BioMap Supporting Natural Landscape area, which depicts the most viable habitat for rare species and natural communities in Massachusetts, and identifies large, naturally vegetated blocks that are relatively free from the impact of roads and other development. (Figure 58)
- 15% crosses through a BioMap Core Habitat that depicts the most viable habitat for rare species and natural communities in Massachusetts. (Figure 58)
- 14 % crosses through a National Heritage & Endangered Species Program (NHESP) Priority Site of Rare Species Habitat & Exemplary Natural Communities, (Figure 58)
- and 10% runs through Estimated Habitats for Rare Wildlife. (Figure 58)

Notes:
- These numbers and percentages are estimated and for planning purposes only

Parcel data was added to Figure 60in order to help identify potential areas of interest or concern.

Other issues/concerns

Examination of the proposed trail route has identified the following issues to be addressed as part of the planning or design process:

1. Crossing of Central Street (Route 101) in the vicinity of South Pleasant Street. Route 101 is a fairly heavily traveled road that provides direct access to Route 140, the city of Gardner and downtown Ashburnham. A number of heavy commercial vehicles utilize this route. Adequate warning and controls are needed to reduce potential bicycle/pedestrian/vehicle conflicts.
2. Crossing of Winchendon Road (Route 12) approximately 0.75 miles east of the Winchendon townline. Again, Route 12 is a heavily traveled road that provides direct access to Winchendon and downtown Ashburnham. Adequate warning and controls are needed to reduce potential bicycle/pedestrian/vehicle conflicts.
3. There are a couple of brook crossings along this line. Improved structures that meet current design standards are likely needed for safety reasons.

Parcel data was added to Figure 60 in order to help identify potential areas of interest or concern.

Recommendations/ Possibilities

Based upon a review of the Phase II layout of the Ashburnham Rail Trail, the following potential alterations or additions have been identified:

1. Include a spur off the trail that runs along South Main Street and Westminster Street and connects to the Park, Whitney Field, Oakmont Regional High School and Overlook Middle School along the way.
2. Loop through the park on South Main Street which could provide parking
3. Possible parking at St. Anne's Church on Center Street
4. Examine parcels around the Route 12 end of the trail for a potential trailend with parking.
5. Possible trail stop location where the rail line passes next to Lake Wampanoag . This would be a good location for a rest/scenic stop and it would also be an added attraction for the trail.

Midstate Trail

The Midstate Trail is a scenic footpath located in Worcester County, 45 miles west of Boston. This 92-mile hiking trail (approximately 8.65 miles of which run through Ashburnham) extends from Rhode Island crossing the gentle hills of central Massachusetts and eventually connecting to the Wapack Trail just north of Mt. Watatic in Ashburnham. The Midstate Trail is highly accessible, easy to hike and the best way to enjoy the natural side of the region. The Midstate Trail is close to large population centers yet it is remarkably wild and scenic. Wachusett Mountain and Mount Watatic, the last undeveloped mountain east of the Connecticut River, can be found on the Trail as well as many interesting geologic, historic and natural features.

It has been stated in the Natural Resources section of this document, under *Strategies for Developing Recreational Potential* "…work to ensure permanent easements for the Mid-state Trail (Ashburnham)" & "promote protection of lands on the Mid State Trail (Ashburnham)."

Environmental Features:

A review of environmental information for the town of Ashburnham shows the following:

- Has 3 potential vernal pools and 1 certified vernal pool (Figure 58)
- 12% Lies within the NHESP BioMap Core Habitat. (Figure 58)
- 51 % Lies within the NHESP BioMap Supporting Natural Landscape. (Figure 58)
- Trail runs through Rt.119 where there is a NHESP Priority Site of Rare Species Habitat & Exemplary Natural Communities. (Figure 58)
- Only slightly touches upon two Massachusetts Resource Identification Program (MRIP) Natural Land Riparian Corridor. (Figure 58)
- Small number or resources present throughout most of the trail. (Figure 59)
- Passes through 3 areas of permanently protected open space. (Figure 59)

Possible Connections to other existing/proposed trails

The following are referenced in Figure 57.

In Ashburnham
- Rt. 12 Corridor
- Rt. 101 Bikeway
- Rt. 119 Bikeway
- Wapack Trail

In Surrounding Communities
- Rt. 2A Bikeway (Westminster)

Wapack Trail

This trail was founded by Robbins and Marion Buck of Rindge, NH, in 1923. The Wapack is a 21-Mile trail (approximately 2 miles of which run through Ashburnham) from the base of Mount Watatic off Rt.119 in Ashburnham Massachusetts, following the Wapack Range to the north side of North Pack Monadnock, on Old Mountain road in Greenfield New Hampshire. The Rt.119 section around Mt. Watatic has a nice 3+ mile loop up the Wapack trail to Watatic summit, connecting to the Midstate Trail.

The trail offers opportunities for hiking, snow shoeing, and cross-country skiing. The trail has open ledges and rocky peaks that provide spectacular views of Mount Monadnock, the Berkshires, the Green Mountains, Boston and the White Mountains. And this trail has natural assets such as spruce forests, wildflowers, blueberries, beaver, moose, fox, rabbit, partridge, migratory birds and sometimes wild turkey.

Possible Connections to other existing/proposed trails

The following are referenced in Figure 57.

In Ashburnham
- Midstate Trail
- Rt. 119 Bikeway

Rt. 101 Bikeway

The Rt.101 Bikeway follows Rt.101 from Rt.119 in Ashburnham to Gardner, then from Gardner to Petersham where it intersects with Rt.32. This bikeroute will connect the Mount Watatic area, Ashburnham, South Ashburnham, & Gardner with the Quabbin Reservoir Loop South in Petersham. This is a route commonly used by bike clubs and hikers from all over the area.

Attractions on or near this trail include:

- Ward Pond and Winnekeag Lake that have many vacation homes and summer camps.
- Remnants of old mills along industrial center South Ashburnham and associated housing still well represented.
- Camp Winnekeag is located on the northern shore of Lake Winnekeag. The Mid-State Trail intersects the forested area of the camp.
- 105 acres on and around the southwest tip of Lake Winnekeag owned by the Nashua Valley Council of the Boy Scouts of America.
- Camp Split Rock located along Lake Winnekeag.

Possible Connections to other existing/proposed trails

The following are referenced in Figure 57.

In Ashburnham
- Ashburnham Rail Trail
- Rt. 119 Bikeway
- Midstate Trail
- Rt. 12 Corridor
- Could connect to the Mass Audubon Society where there is a mile-and-half trail that passes through a 34-acre field, this land abuts the Monadnock trust and Ashburnham State Forest

In surrounding communities
- Rt. 140 Bikeway (Westminster)
- North Central Pathway (Gardner)
- Rt. 68 Bikeway (Gardner)

Rt.12 Corridor Bikeway / Twin City Rail Trail

The Rt.12 Corridor Bikeway follows the corridor of Rt.12 from the Sterling/West Boylston line to the New Hampshire State Line. This section of Rt.12 northwest of Fitchburg is approximately 6.3-miles long (in Ashburnham) and is used by many bicycle clubs. This roadway was proposed as a bike route by MRPC in 1979. The section south of Leominster has been used occasionally by bicycle clubs as well. The Twin City Rail Trail runs for approximately 4.2 miles along an abandoned rail line, parallel to Route 12 in Fitchburg/Leominster and this would be an alternate

route to escape heavy traffic conditions on this roadway. This proposed bikeway would connect Winchendon, Ashburnham, and Sterling to the regional centers of Fitchburg and Leominster. It will also help connect the Fitchburg/Leominster area to the Worcester area to the south.

Possible Connections to other existing/proposed trails

The following are referenced in Figure 57.

In Ashburnham
- Ashburnham Rail Trail
- Rt. 101 Bikeway
- Midstate Trail

In surrounding communities
- North Central Pathway (Winchendon)
- Rt. 202 Corridor (Winchendon)

Rt.119 Bikeway

This proposed bikeway follows Rt.119 from Groton/Littleton Town Line to the New Hampshire State Line. This route would connect Ashburnham, Ashby, Townsend, & Groton. Also two spurs off this route would be beneficial from a recreational viewpoint. The town of Groton's proposal called for a bike path from Route 119 to Knopps Pond. This bike path was approved several years ago by the Department of Public Works (DPW); however, local funding has not been available to be implemented. The length of this proposed bikeway would run approximately 3.27 miles into the town.

Possible Connections to other existing/proposed trails

The following are referenced in Figure 57.

In Ashburnham
- Mid State Trail
- Wapack Trail

In surrounding communities
- Rt. 31 Bikeway (Ashby)

b) Existing & Proposed in Surrounding Communities (Ashby, Fitchburg, Gardner, Westminster, Winchendon)

(1) Existing Trails

- Gardner- North Central Pathway: A 3.5-mile section (Class I) of a planned 16-mile, passive recreation trail proposed to link the communities of Winchendon and Gardner. Phase 1 was completed in 1997 and runs along Crystal Lake. Remaining section was completed in 2000-2002. An additional 3.2-mile section is under construction.

- Fitchburg-Parkhill/Coggshall Park Bikeway: A 2-Mile Bicycle Path (Class I) and partial Bike Route (Class III) facility.

- Ashby: A Class III Bicycle Route on Route 31 from north of Route 119 to the New Hampshire state border, which was reconstructed in 1982 with wider shoulders making it ideal for a bike route.

(2) Proposed Trails

- Upper Millers River Bikepath – This proposed bikepath would use the abandoned railroad which runs parallel to Route 12 from Ashburnham to the New Hampshire State Line via Winchendon.

- Fitchburg - North Street Bike/Pedestrian Way: A Class III on street bicycle path on North Street between Main Street and the Intermodal Center and Fitchburg State College. Transportation Enhancement funds as well as High Priority Project and other funds have been utilized as part of a complete renovation of the North Street Corridor.

- Twin City Rail Trail – Fitchburg/Leominster Commuter Loop: This bikeway has been proposed by the two communities to connect the two major urbanized centers and to reduce traffic congestion on Route 12. This bikepath would use the railroad tracks parallel to Route 12 from Leominster center to Fitchburg Center.

- Heritage State Park Loop – Gardner: This bikeway, proposed by the City of Gardner, would begin at the Heritage State Park Headquarters at Lake Street and Central Street in downtown Gardner and would connect to Dunn's Park via Route 101.

- John Fitch Highway – Fitchburg: This proposed bikeway would run parallel to John Fitch Highway in Fitchburg from Route 31 to the vicinity of the North Nashua River.

- Nashua River Bikeway: The Nashua River Watershed Association (NRWA) has expressed interest in including a bikeway in its Nashua River Greenway. The bikeway would be approximately 14-miles long and would connect the urban areas of Fitchburg/Leominster and Clinton.

- Route 2A: This proposed bikeway follows the corridor of Route 2A and would connect Athol, Phillipston, Templeton, Gardner, Westminster, Fitchburg, Lunenburg, Shirley, and Ayer via a cross-regional route.

- Route 68: This proposed bikeway extends along Route 68 from Route 32 to the Rutland Town Line. This bikeway would primarily serve Hubbardston, Royalston, and Templeton connecting them to Gardner.

- Route 140 Corridor: This proposed bikeway follows the corridor of Route 140 from Route 12 in Winchendon to the vicinity of Wachusett Mountain in Princeton.

- Route 202 Corridor: This proposed bikeway follows the corridor of Route 202 from the New Hampshire line to Templeton. The route connects Winchendon, Baldwinville, and Templeton.

4. Funding Options

a) Federal

The Transportation Equity Act for the 21st Century (TEA-21) expired on September 30, 2003 and since that time Congress has past various extensions to the Act while new authorizing legislation is developed. TEA-21 was enacted on June 9, 1998, succeeded the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) and authorized the Federal surface transportation programs for highways, highway safety, and transit for the 6-year period from 1998-2003. Current debate in Congress centers on the follow-up 6 year reauthorization to TEA-21. The Senate and House have both passed different versions from the Administration's original proposal and is now in conference. The bills are known as: The Safe, Accountable, Flexible, and Efficient Transportation Equity Act of 2003, SAFE-TEA, (S.1072) by both the Administration and the Senate; and The Transportation Equity Act: A Legacy for Users, TEA-LU (H.R.3550) by the House.

Each version contains provisions for Bicycle and Pedestrian funding under varying programs and titles. Therefore, the information provided may change once final legislation is enacted. Please consult state, federal and regional officials regarding questions on these programs for the most current information.

The following is a brief description of potential federal funding sources related to bicycle and pedestrian facilities.

(1) TEA-21/SAFETEA/TEA-LU

- Surface Transportation Program (STP)
  Within TEA-21, and under current proposals, STP is the primary source of funds to the states for construction/reconstruction of roads, highways, and bridges. Funds can also be used for transit and bicycle/pedestrian projects as well, however, competition for these funds is exceedingly hard. The likelihood of bicycle/pedestrian projects obtaining direct STP funds, especially in Massachusetts, is slim.

- Transportation Enhancement Program (TE)
  ISTEA created the TE program as a way to promote multi-modal transportation by providing funds for projects such as:

  1. Pedestrian And Bicycle Facilities
  2. Pedestrian And Bicycle Safety And Educational Activities
  3. Acquisition Of Scenic Or Historic Easements And Sites
  4. Scenic Or Historic Highway Programs Including Tourist And Welcome Centers
  5. Landscaping And Scenic Beautification
  6. Historic Preservation
  7. Rehabilitation And Operation Of Historic Transportation Buildings, Structures Or Facilities
  8. Conversion Of Abandoned Railway Corridors To Trails
  9. Control And Removal Of Outdoor Advertising
  10. Archaeological Planning & Research
  11. Environmental Mitigation Of Runoff Pollution And Provision Of Wildlife Connectivity
  12. Establishment Of Transportation Museums

  All versions of the current reauthorization legislation continues the TE program. The Rails to Trails Conservancy describes TE programs in the online manual "*Acquiring Rail Corridors: A How To Manual*" as follows:

  > The Enhancements provisions are administered by each state's Department of Transportation (DOT). To receive Enhancements funds, you will need to submit a formal application to your state DOT. In most states, the project sponsor submitting an Enhancements application must be a local or state agency, although some states also allow nonprofit organizations to submit applications. Nonprofits are generally required to demonstrate some level of government sponsorship or endorsement before their applications are considered.
  >
  > All Enhancements awards require that the project sponsor or the state provide at least 20% of the project's funding. The federal government provides the remaining 80%. This local match requirement is an extremely important issue that project sponsors need to address carefully, especially since matching rules and ratios vary from state-to-state.
  >
  > Since requests for Enhancements funding exceed the funds available, Enhancements funds are awarded through a highly competitive selection process. In most states, the selection process begins when applications are submitted to the local Metropolitan Planning Organization (MPO) or other regional transportation planning body. MPOs play an active role in screening, endorsing, prioritizing, and, in some cases, actually selecting projects for funding. Once your application has been reviewed by your MPO, it will be passed along to the state DOT for statewide review. Many states have created statewide advisory committees to assist in evaluating projects. These advisory committees typically consist of citizens and representatives from the state DOT and other state agencies such as Department of Natural Resources and the Department of Tourism. Source: (www.trailsandgreenways.org/resources/development/acquis/arc_book.asp)

Within Massachusetts, project applications are submitted to the appropriate Regional Planning Agency, or if the project crosses RPA boundaries, to the statewide enhancement committee. The Massachusetts Highway Department maintains guidelines, application procedures and an implementation manual on their website www.mass.gov/mhd/planning/enh.htm.

- Congestion, Mitigation and Air Quality Improvement Program (CMAQ)
  The CMAQ program was developed to fund projects that assist in achieving the goals set forth in the Clean Air Act. In metropolitan areas classified as "non-attainment" i.e. they do not meet the national air quality standards for ozone and carbon monoxide levels, bicycle and pedestrian facilities may be eligible for funding. Current re-authorization legislation continues the CMAQ program.

- Recreational Trails Program
  All re-authorization versions contain provisions under this program that seeks to fund eligible trail projects such as the following
  1. Maintenance and restoration of existing recreational trails;
  2. Development and rehabilitation of trailside and trailhead facilities and trail linkages for recreational trails;
  3. Purchase and lease of recreational trail construction and maintenance equipment;
  4. Construction of new recreational trails, except that, in the case of new recreational trails crossing Federal lands;
  5. Acquisition of easements and fee simple title to property for recreational trails or recreational trail corridors;
  6. Assessment of trail conditions for accessibility and maintenance;
  7. Use of trail crews, youth conservation or service corps, or other appropriate means to carry out activities under this section;
  8. Operation of educational programs to promote safety and environmental protection as those objectives relate to the use of recreational trails, supporting non-law enforcement trail safety and trail use monitoring patrol programs, and providing trail-related training, but in an amount not to exceed 5 percent of the apportionment made to the State for the fiscal year; and
  9. Payment of costs to the State incurred in administering the program, but in an amount not to exceed 7 percent of the apportionment made to the State for the fiscal year to carry out this section.

  Please contact appropriate state officials regarding the final legislation that will effect the list of eligible projects.

- Other Programs/Proposals
  Other Programs/Proposals contained in a least one of the re-authorization legislations that can impact bicycle and pedestrian projects include:

  - Bicycle Transportation and Pedestrian Walkways - Provides that bicycle and pedestrian projects are eligible for NHS, STP (including TE), CMAQ, Federal Lands, Scenic Byways, and Recreational Trails funds.

  - Highway Safety Improvement Program - Programs to reduce the number and severity of crashes at public highway-rail grade crossings (Section 130) and correct or improve hazardous locations, sections, and elements on any public road, public surface transportation facility, or public bike/ped path or trail

  - Safe Routes to School - New program to enable and encourage children in grades K-8 or K-12 to walk/bike safely to school.

  As with all of the above programs, the final re-authorization legislation may affect what types of projects are eligible, what programs are available and what the application procedure would entail. Please contact state and federal officials for the most up-to-date information.

- Sources

1. U.S. Department of Transportation – Re-Authorization of TEA-21 www.fhwa.dot.gov/reauthorization/index.htm
2. Trails and Greenways Clearing house - www.trailsandgreenways.org/
3. Rails-to-Trails Conservancy - www.railtrails.org
4. Massachusetts Highway Department - www.mass.gov/mhd

b) State

(1) Greenways and Trails Demonstration Grants Program

The Massachusetts Department of Conservation and Recreation (DCR), formerly the Department of Environmental Management, "provides grants of up to $5,000 to non-profit organizations, municipalities, and regional planning associations to support innovative greenway and trail projects throughout Massachusetts. DEM will also consider requests of up to $10,000 for multi-town greenway and trail projects. These additional funds are intended to promote linkages across town boundaries and foster partnerships among neighboring communities. " (Source: www.mass.gov/dem/programs/greenway/grants.htm). For more information about the Grant Program, contact the Director of the Greenways Program at (413) 586-8706.

(2) Recreational Trails Program

The following information is from the DCR web site (www.state.ma.us/dem/programs/trails/grants.htm):

> The Recreational Trails Program provides funding support for a variety of trail protection, construction and stewardship projects throughout Massachusetts. This national program makes funds available to states to develop and maintain recreational trails and trail-related facilities for non-motorized and motorized recreational trail uses. The Program is authorized and funded through the federal "Transportation Equity Act for the 21st Century" known as TEA-21. It is administered on a reimbursement basis by the Massachusetts Department of Conservation and Recreation (formerly DEM), in partnership with the Massachusetts Recreational Trails Advisory Board and the Massachusetts Highway Department. Eligible applicants include non-profit organizations, government agencies, and municipalities.
>
> The Recreational Trails Program limits the federally-funded share of each trail project to 80%. This means that at least 20% of the total project value must come from other sources. A cash match, a "soft match" in the form of materials, labor, and in-kind services, or a combination of both is permitted. Project funding, not including the match, may range from $2000 to $50,000. Requests for amounts greater than $50,000 will be considered for larger projects with statewide or regional significance.

The program legislation requires that 30% of program funds be used for projects related to motorized trail use, 30% be used for non-motorized projects, and the remaining 40% are discretionary. Projects must be primarily recreation - rather than transportation-oriented.

(3) Community Development Block Grant Program (CDBG)

The Trails and Greenways Clearing house states "As rail-trails become increasingly important community development tools, rail-trail projects may be eligible for funding through the Community Development Block Grant (CDBG) program of the U.S. Department of Housing and Urban Development. The CDBG program is designed to support community improvement and redevelopment projects. Rail-trails with documentable economic, cultural and historic merit may be eligible for CDBG funding. Seattle's Burke-Gilman Trail and the Baltimore & Annapolis Trail in Maryland both received funds through this program." For further information on this program, contact the local RPA, chief elected official or planning department.

5. Design and Cost of Trails

Costs for construction can vary depending upon the type of trail and its usage (i.e. walking, biking, equestrian, skating, etc.) so exact amounts are difficult to estimate. However, information from www.bicyclinginfo.org indicates current costs can range from $40,000 per mile for soft surface trail to $125,000 per mile for asphalt trail. Typical highway design costs run roughly 10 to 20 percent of the construction costs. Utilizing these figures as a guideline, the following are very rough design and estimate costs for the Nashua River Trail and its potential spurs and connections. They should be viewed for order of magnitude purposes only. In addition, acquisition costs of parcels, etc. are not part of these estimates.

Trail Name/ID	Length (miles)	Design Estimate Range (20% of Construction)		Construction Estimate Range	
Phase II	4	**$32,000**	$100,000	$160,000	$500,000
South Main Street	1.75	$14,000	$43,750	$70,000	$218,750

NOTE: Estimates based on:
Design: 20% of Construction Estimate
Construction: Low - $40,000 per mile; High - $125,000 per mile

6. Recommendations

As indicated in the information compiled, the development of various trails within the Town of Ashburnham has the potential to link several assets, from environmental to recreational, that would be attractive to many users. In addition, trails and bikeways can provide many economic benefits to the area as well as stimulate tourism, attract prospective residents and potentially increase property values.

The recommendations below are proposed to enhance the community's rail trail efforts and to provide additional recreational opportunities while retaining the character of the town.

1. Continue efforts to develop Phase I of the Ashburnham Rail Trail through existing committees and groups. Participants should include representatives of town boards and departments, business groups, interested citizens, etc. This group should continue and conduct additional research on the trail, Phase II and their connections within and outside of Ashburnham. Trails and any spurs or segments can be prioritized for implementation.

2. Based upon the efforts and findings of the town and its committee, work with the MRPC, state and federal representatives, and state and federal agencies to secure funds for design, acquisition and construction of Phase I and II. Further technical assistance can be requested to address further any identified concerns or issues. Local volunteer groups may also be organized to assist in the development of the trails.

VII. TRANSPORTATION APPENDICES

A. Appendix Counts

B. Appendix

Accident Tables

Ashburnham Town Records

Date	*Time*	*First Street*	*Second Street*	*Injuries*	*Directions*	*Damage*	*Collision With*	*Accident Manner*	*Weather/Surface Conditions*
2/19/97	18:00	Main St. (Rt.12)	Central St.(101)	0	1-W 2-N	MV 1-$1000	MV	Angle	Cloudy/Wet
11/21/97	10:17	Central St. (101)	Main St. (12)	0	1-N 2-N	MV 1&2 $1000	MV	Rear End	Clear/Dry
10/7/99	17:30	Main St. (Rt.12)	Central St.(101)	0	1-E, 2-E	1-$3500+	MVTRAF	Rear End	Clear/Dry
10/13/00	16:09	Main St. (Rt.12)	Central St.(101)	0	1-N, 2-N	1-$1000, 2-$100	MVTRAF	Rear End	Clear/Dry
5/5/01	15:37	Center St (101)	Main St. (12)	0	1-N, 2-N	1-$1000, 2-$100	MVTRAF	Rear End	Clear/Dry
5/21/97	6:30	Water St. (Rt 101)	Main St. (12)	0	1-S 2-N	MV	MV	Angle	Clear/Dry
6/29/98	13:08	Water St. (Rt 101)	Main St. (12)	1	1-S 2-N	MV	MV	Angle	Cloudy/dry
11/20/99	12:00	Rt. 12	Rt. 101	0	1-E, 2-E	?	MVTRAF	Rear End	Clear/Dry

Massachusetts Accident Database

Date	*Time*	*Street*	*Intersection*	*Total Vehicles*	*Injured*	*Veh Dir*	*Object hit*	*Manner*	*Weather/Surface/ Light*
10/13/00	16:00	RTS 12/101	47 MAIN ST	2	0	1-N, 2-N	MVTRAF	REAREND	Clear/Dry/Daylight
~~1/30/01~~	~~10:00~~	~~GARDNER RD~~	~~RTE 101~~	~~3~~	~~0~~	~~1-N, 2-N~~	~~MVTRAF~~	~~REAREND~~	~~Rain/Ice/Daylight~~
7/6/01	18:00	47 MAIN ST	3 CENTRAL ST	2	0		MVTRAF	ANGLE	Clear/Dry/Daylight
10/8/01	16:00	RTE 12	RTE 101	2	0	1-N, 2-S	MVTRAF	ANGLE	Clear/Dry/Daylight
12/8/01	11:00	RT 101 S	RTE 101 RT 101 S	1	0	1-S	OTHER	UNKNOWN	Cloudy/Dry/Daylight

Main & Central Sts:

1997 - 2 crashes (1 angle, 1 rear)

1998 - 0 crashes

1999 - 1 crash (rear)

2000 - 1 crash (rear)

2001 - 2 crashes (1 rear, 1 angle) + 1 possible

Main & Water Sts:

1997 - 1 crash (angle)

1998 - 1 crash (angle)

1999 - 0 crashes

2000 - 0 crashes

2001 - 0 crashes

Rts 12 & 101:

1999 - 1 crash (rear)

2001 - 1 crash (angle)

C. Appendix

MUTCD Signal Warrants

Source: Manual on Uniform Traffic Control Devices – Millennium Edition, December 2000;
U. S. Department of Transportation, Federal Highway Administration

D. Appendix

Analysis Summaries

Major Street: Main St (EB/WB) *1 lane*
Minor Street: Water St (SB) *2 lanes*

Hour	*Major (EB) Volume*	*Major (WB) Volume*	*Major St Volume (Total)*	*Minor St (SB) Volume*	*Warrant 1A - 100%*		*Warrant 1A - 70%**		*Warrant 1B - 100%*		*Warrant 1B - 70%**		*Warrant 2 - 100%*	*Warrant 2 - 70%**	*Warrant 3 - 100%*
0:00	9	19	28	4	-	-	-	-	-	-	-	-	-	-	
1:00	11	5	16	1	-	-	-	-	-	-	-	-	-	-	
2:00	5	8	13	5	-	-	-	-	-	-	-	-	-	-	
3:00	9	6	15	1	-	-	-	-	-	-	-	-	-	-	
4:00	33	9	42	10	-	-	-	-	-	-	-	-	-	-	
5:00	134	25	159	45	-	-	-	-	-	-	-	-	-	-	
6:00	261	114	375	105	-	-	**Y**	**Y**	-	Y	-	Y	-	-	
7:00	359	128	487	141	-	-	**Y**	**Y**	-	Y	-	Y	-	**Y**	
8:00	225	140	365	102	-	-	Y	**-**	-	Y	-	Y	-	-	
9:00	241	133	374	99	-	-	Y	**-**	-	Y	-	Y	-	-	
10:00	248	151	399	97	-	-	Y	**-**	-	Y	-	Y	-	-	
11:00	224	172	396	71	-	-	Y	**-**	-	-	-	Y	-	-	
12:00	245	171	416	86	-	-	Y	**-**	-	Y	-	Y	-	-	
13:00	225	164	389	82	-	-	Y	**-**	-	Y	-	Y	-	-	
14:00	280	198	478	105	**-**	-	**Y**	**Y**	-	Y	-	Y	-	**-**	
15:00	299	268	567	96	Y	**-**	Y	**-**	-	Y	-	Y	-	**-**	
16:00	310	323	633	129	Y	**-**	**Y**	**Y**	**-**	Y	**Y**	**Y**	**-**	**Y**	
17:00	296	315	611	126	Y	**-**	**Y**	**Y**	**-**	Y	-	Y	**-**	**Y**	
18:00	230	235	465	116	-	-	**Y**	**Y**	-	Y	-	Y	-	-	
19:00	181	185	366	69	-	-	Y	-	-	-	-	-	-	-	
20:00	130	124	254	47	-	-	-	-	-	-	-	-	-	-	
21:00	76	87	163	24	-	-	-	-	-	-	-	-	-	-	
22:00	49	38	87	19	-	-	-	-	-	-	-	-	-	-	
23:00	27	32	59	3	-	-	-	-	-	-	-	-	-	-	
peak			633	129											Y
peak delay			(veh-hrs)	0.6											N
					no		*no*		*no*		*no*		*no*	*no*	*no*

* Ashburnham had a population in 2000 of 5,546 people.

Warrant 4 - Ped volumes	*n/a*
Warrant 5 - School crossing	*n/a*
Warrant 6 - Coordinated signals	*n/a*
Warrant 7 - Crash experience	*no - 0 to 1 angle crash / year*
Warrant 8 - Roadway network	*no*

Summary: **This intersection does not meet any warrants.**

Major Street: Main St (EB/WB) *1 lane*
Minor Street: Central St (NB) *1 lane*

Hour	*Major (EB) Volume*	*Major (WB) Volume*	*Major St Volume (Total)*	*Minor St (NB) Volume*	*Warrant 1A - 100%*		*Warrant 1A - 70%**		*Warrant 1B - 100%*		*Warrant 1B - 70%**		*Warrant 2 - 100%*	*Warrant 2 - 70%**	*Warrant 3 - 100%*
0:00	4	19	23	2	-	-	-	-	-	-	-	-	-	-	
1:00	8	7	15	4	-	-	-	-	-	-	-	-	-	-	
2:00	1	12	13	5	-	-	-	-	-	-	-	-	-	-	
3:00	10	5	15	3	-	-	-	-	-	-	-	-	-	-	
4:00	28	14	42	12	-	-	-	-	-	-	-	-	-	-	
5:00	132	61	193	25	-	-	-	-	-	-	-	-	-	-	
6:00	209	196	405	65	-	-	Y	-	-	-	-	-	-	-	
7:00	283	222	505	113	Y	-	**Y**	**Y**	-	Y	-	Y	-	-	
8:00	225	160	385	109	-	-	**Y**	**Y**	-	Y	-	Y	-	-	
9:00	166	189	355	116	-	-	**Y**	**Y**	-	Y	-	Y	-	-	
10:00	184	232	416	141	-	-	**Y**	**Y**	-	Y	-	Y	-	-	
11:00	166	230	396	132	-	-	**Y**	**Y**	-	Y	-	Y	-	-	
12:00	182	216	398	122	-	-	**Y**	**Y**	-	Y	-	Y	-	-	
13:00	182	229	411	140	-	-	**Y**	**Y**	-	Y	-	Y	-	-	
14:00	197	271	468	155	-	Y	**Y**	**Y**	-	Y	-	Y	-	**Y**	
15:00	226	321	547	167	**Y**	**Y**	**Y**	**Y**	-	Y	-	Y	-	**Y**	
16:00	182	384	566	176	**Y**	**Y**	**Y**	**Y**	**-**	Y	-	Y	**-**	**Y**	
17:00	169	399	568	173	**Y**	**Y**	**Y**	**Y**	**-**	Y	-	Y	**-**	**Y**	
18:00	145	304	449	136	-	-	**Y**	**Y**	-	Y	-	Y	-	-	
19:00	117	221	338	92	-	-	-	-	-	Y	-	Y	-	-	
20:00	93	143	236	56	-	-	-	-	-	-	-	-	-	-	
21:00	49	98	147	31	-	-	-	-	-	-	-	-	-	-	
22:00	30	49	79	27	-	-	-	-	-	-	-	-	-	-	
23:00	24	30	54	11	-	-	-	-	-	-	-	-	-	-	
peak			566	176											Y
peak delay			(veh-hrs)	1.5											N
					no		***Yes***		*no*		*no*		*no*	***Yes***	*no*

* Ashburnham had a population in 2000 of 5,546 people.

Warrant 4 - Ped volumes *n/a*
Warrant 5 - School crossing *n/a*
Warrant 6 - Coordinated signals *n/a*
Warrant 7 - Crash experience *no - 0 to 1 angle crash / year*
Warrant 8 - Roadway network *no*

Summary: **This intersection meets warrants 1A and 2 (at 70%).**

E. Appendix

Process Required to Successfully Implement a City or Town Initiated
Federal-Aid Funded Highway Project

VIII. COMMUNITY SCOPE OF SERVICES

EXECUTIVE OFFICE of ENVIRONMENTAL AFFAIRS
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The Commonwealth of Massachusetts

Mitt Romney, Governor Kerry Healey, Lt. Governor

M E M O R A N D U M

This Memo and the budget on page three are part of the contract.

TO: MRPC Contact: Amanda Amory, Glenn Eaton
Town of Ashburnham Contact:
FROM: Executive Order 418 Interagency Work Group
DATE: 3/5/03
RE: Request for approval of Scope of Services in the Community Development Planning Process

The Interagency Work Group (IAWG) is in receipt of a Revised Proposed Scope of Services for CD planning submitted by the Regional Planning Agency on behalf of the community on 12/24/02.

The Town used no consultant to conduct preplanning activities leading to the development of the Scope of Services utilizing $0 in pre-planning services.

The appropriate members of the Interagency Work Group (IAWG) reviewed the proposed Scope of Services. The findings contained in this report were agreed upon by the IAWG during a meeting held on 1/29/03. The Scope of Services is approved as modified in red. If the changes are agreeable to the various parties, planning can commence as soon as the signature page is signed by all parties.

Visioning and Goal Setting: Approved as modified

Open Space and Resource Protection: Approved as modified

Housing: Approved as modified

Economic Development: Scope approved as modified in red contingent on addressing housing for expected workforce.

Transportation: MassHighway has reviewed this scope and find it an acceptable Transportation element, however we are requesting the submission of a detailed budget. Upon receipt MassHighway will send a notice to proceed.

Putting It All Together: Approved as modified

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Budget: The total EO418 budget for the Scope proposed is $30,000 including preplanning. The amount utilized for preplanning was $0. The approved planning tasks utilize the remaining $30,000.

Definitions related to EO418 "affordable housing":
Low income households are those making up to 50% of area-wide median income
Moderate income households are those making up to 80% of area-wide median income
Middle income households are those making up to 150% of area-wide median income

Administrative Arrangements: The RPA must develop an attachment to the Scope of Services which includes any administrative arrangements between the consultant and RPA, e.g., procedures and schedule for paying consultants, procedures for securing authorization from the community before the RPA pays the consultant, etc. Note: The MSA Contract signed by all consultants, including the RPAs, constitutes the general terms and conditions for performing work under EO418.

Budget, funding sources, and approved tasks and consultants: On page 3, we provide a summary of the tasks within the Scope of Services showing the funding sources to be used by the Regional Planning Agency (RPA) in processing bills for those services. It is critical that the RPA invoice the correct state agencies and pay consultant(s) consistent with this budget.

Signature Page: The signature page, when fully executed, turns the Scope of Services into a contract among the RPA, consultant(s), and community.

Record keeping: The fully executed copy of Scope of Services including all attachments and this memo is the official file copy of the Scope. In event of a problem or an audit, the RPA may be required to produce this official record. A copy of the fully executed Scope with all attachments should be forwarded to the IAWG.

Plan Submission: Four electronic copies of the completed CD or master plan in pdf format must be provided to the IAWG. No paper copies of the plan are required. One electronic copy including all GIS data files must be provided to the IAWG. All GIS products should be submitted as a stand-alone ArcView 3.x project with views and layouts, as well as all of the necessary data and graphics upon which the project depends. It is the intent of the IAWG that all completed plans will be placed on the EO418 web at DHCD.

If the community has questions related to the report, it should contact the RPA or Ann Whittaker at DHCD by phone: (617) 727-7001 x 401 or e-mail: ann.whittaker@state.ma.us for clarification. Please note that the primary source of information and guidance to the community throughout this process is the RPA, which is serving as the project administrator for the IAWG.

Ashburnham		Pre-planning		Planning					
Deliverables from Scope of Services	Consultant	EOEA Planning for Growth	DHCD CDBG 1%	EOEA Planning for Growth	EOEA Mass GIS	DHCD CDBG 1%	DHCD CDBG Planning	MassHighway SPR	Municipal Funds
Preplanning Services	none	0	0						
Open Space and Resource Protection Element	MRPC			5,000					
Housing Element	MRPC						7,000		
Economic Development Element	MRPC			5,500			5,500		
Transportation Element	MRPC							7,000	
Putting It All Together	MRPC (from Open Space element)			0		0			
Totals		0	0	10,500	0	0	12,500	7,000	0

Total EOEA	10,500
Total DHCD	12,500
Total MHD	7,000
Total EO418	30,000
Leveraged funds	0
Total Planning Project	30,000

On behalf of and in cooperation with the Town of Ashburnham ("Municipality"), the Montachusett Regional Planning Commission (MRPC, also referred to as the "Consultant") shall provide the planning services necessary to complete a Community Development Plan for the Municipality. The Municipality and the Consultant agree to comply with all applicable laws, regulations, policies and guidance as set forth by the:
Federal Department of Transportation (DOT)
Federal Department of Housing and Urban Development (HUD)
State Department of Housing and Community Development (DHCD)
State Department of Economic Development (DED)
State Executive Office of Environmental Affairs (EOEA)
State Executive Office of Transportation and Construction (EOTC)

The Consultant shall deliver the following services to the Municipality.
Review of all local and regional planning documents (i.e. 1984 Master Plan). The MRPC will prepare a summary report about their contents and relationship to the Executive Order/Community Development Plan Program.
One pubic forum shall be held in the community to explain the EO 418 Program and solicit public opinion concerning updating or establishing goals and objectives to develop affordable housing, improve the local economy, identify ways to implement open space and resource protection and make transportation infrastructure improvements.

VISION STATEMENT AND ASSETS AND LIABILITIES INVENTORY
The Town of Ashburnham shall complete a 1-2 page Vision Statement and a short list of Assets and Liabilities as a precursor to this planning process. This Vision Statement and list of items the community wishes to protect or enhance (assets) and change (liabilities) will guide the completion of the remainder of the Community Development Plan. The Assets and Liabilities discussion and the Vision and Goals Statement will be further refined through the remaining EO418 discussions within the community.

Open Space & Resource Protection
The Consultant shall deliver Community Development Plan, Open Space and Resource Protection Element planning services, report(s) and map(s) in accordance with the "Minimum Requirements" of the Commonwealth of Massachusetts, Community Development Plan program as per Executive Order 418, Community Development Plan Guidebook and subsequent technical guidance received from relevant State departments. *The Town has a provisionally accepted Open Space and Recreation Plan. Work completed under this EO 418 scope of services shall not duplicate the Open Space and Recreation Plan.* At a minimum, the services to be delivered include the following.

The purpose of the Natural Resources Element task is to develop information, to be shown on a series of maps, which will enable the community to discuss the natural resource needs of the community. These maps will be used at the public forum to determine the areas of the community, which are critical for protection through acquisition, zoning or other means.

It is also important to note that the Natural Resource element will provide base maps that will be essential for follow-up discussions relating to areas of the community which the residents feel are appropriate for use in future housing or economic development.

Map 1 Existing Conditions
Prepare a map that will illustrate the 1999 MacConnell Land Use data broken into the 11 "groups" of Land Use Codes selected by MassGIS. In addition, show the Permanently Protected Open Space and Municipal lands from the buildout analysis as an overlay hatch pattern and show a blackline outline of zoning district boundaries. This map is designed to show the existing pattern of various categories of land uses, open spaces and regulations for the community.

Map 2 Future Land Use Based on Current Zoning (Buildout Assumptions)
In this map, all developed land (i.e., the white space) from Buildout Map 2 (including miscellaneous, land use update areas, absolute constraint areas, and open spaces) is to be shown as the existing underlying land use (broken into the 11 land use codes from MassGIS/MacConnell). The Open Space and Munici-

pal lands will also be shown as a hatch overlay pattern. For communities where wetlands are not "absolute constraints, the areas to be shown as the existing MacConnell Land Use will also include the wetlands, which may be able to be included in lot area required for zoning, but which may not be built in due to zoning or other local regulations.

All "undeveloped" lands (showing as developable lands on Map 2 of the buildout) within town which do not meet the specifications above will be shown as 11 land use codes, based upon conversion of zoning into Future Land Use by 11 codes as shown on MassGIS "crosswalk" sheet. These will show in the same colors, but a different shading, at the existing land uses.

Calculations will include total land area, and percent of town, within each land use at buildout. Also, the same calculations will be completed by subwatershed area, for purposes of comparisons to the 1999 impervious surface calculations.

Map 3 Natural Resources Component
This map illustrates the existing "developed" land uses (residential, industrial, commercial) by the 11 land use code categories, and also shows the agricultural uses (pasture, crops, orchards). It then shows as overlays the following:

A) Endangered Species
B) Priority Habitats
C) Wetlands/Streams
D) Protected and municipal open space from buildout analyses
E) Vernal pools (certified and reported)
F) ACECs
G) Anadramous fish runs
H) Watershed divides
I) Well sites and zone I and II contribution areas

Map 3a will be prepared which illustrates, in gradations of color, the areas where more than one of these features occurs (i.e.; darker shades indicated more features than lighter shades). These represent the areas that the community feels are least appropriate for future development. Other areas are assumed to be most appropriate for future housing, commercial, or industrial use.

<u>Map 4 Water Resources Component/Impervious Surface Calculations</u>
Map illustrates

A) Land Use 99 by 21 land use codes (needed for calculations)
B) Watershed sub-basin divides
C) Broad-brush approximations of sewer service areas from MetroPlan
D) Well sites and zone I and II contribution areas
E) Floodplains
F) Potential water supplies/aquifers

A and B above are used to calculate the impervious surface area by town and by watershed as acreage and as a percent of the town and the watershed sub-basin. There is no other water analysis assumed in this estimate.

The Consultant shall deliver to the Municipality a report of the findings of the results of research and analysis of the community's open space and recreation assets and liabilities. This report shall include GIS-produced maps with related narrative and data reflecting the findings reached through the open space and recreation research and analysis tasks. A GIS-Land Suitability Map shall be produced showing areas most suited for housing, economic development, transportation and community facilities. The narrative section this report shall include the community's priorities for the protection of wildlife habitat, water resources, vistas and key landscapes, and documentation concerning outdoor recreational facilities. Recommendations will be presented to the community concerning the steps necessary and benefits of completing an Open Space and Recreation Plan (separate from the Community Development Planning work to be completed within the scope of this contract).

Consultant for this Element: Montachusett Regional Planning Commission.
Fee for this element:

STAFF	TOTAL HOURS	TOTAL BUDGET
Comprehensive Planning Director	11	$800.00
Comprehensive Planning Staff	30	$2,100.00
Transportation Planning Director		
GIS Technician	30	$2,100.00
TOTAL	71	$5,000.00

The cost for work related to the development of the Open Space Preservation element shall not exceed $5,000.00.

The Consultant shall take care to insure that tasks completed within the Open Space and Resource Protection section will not duplicate those recently completed through the Town of Ashburnham's completion of its Open Space and Recreation Plan.

Material that was located here has been relocated to putting it all together

HOUSING
The Consultant shall deliver Community Development Plan, Housing Element planning services, report(s) and map(s) in accordance with the "Minimum Requirements" of the Commonwealth of Massachusetts, Community Development Plan program as per Executive Order 418, Community Development Plan Guidebook and subsequent technical guidance received from relevant State departments. At a minimum, the services to be delivered include:

H.1. Housing Inventory Map(s) and Accompanying Report. An assessment of the community's current housing conditions based upon information obtained from sources such as the 2000 US Census (for income, housing units, specific conditions, age and household size, population trends, income levels, housing costs, vacancy rates, age and condition of housing stock), periodicals such as the "Banker and Tradesman", DHCD, local Board of Assessors and Building Inspector, Rural Housing Improvement, Inc., local housing authority, relevant housing organizations such as community development corporations (where available), and Realtors (building permit data). Data from existing resources shall be obtained to produce a report of existing housing conditions in the community. Generation of new housing data shall not be created under this scope of services. While the administering state departments have deleted the "housing inventory map" as a requirement of this program, where possible, housing locations shall be described in GIS-map and narrative formats.

H.2. Housing Needs Report. An evaluation of current housing needs of residents shall be created. The ability of residents to afford previously constructed and newly constructed dwelling units (homes, mobile homes and condominiums) shall be analyzed (a universal definition of affordability shall be explained and used within the context of this section of the final report). Based upon these analyses, an assessment of housing demand shall be completed. The housing demand report will attempt to quantify the need for the total number of dwelling units, by type, needed in the community, by user groups (i.e. families, single persons and senior citizens) of low, moderate, and middle-income and by location in the community.

H.3. Supply and Demand Comparison. Based upon the above analyses and data, a "housing gap analysis" shall be created identifying the gaps between what housing is available and what is needed for households with low, moderate and middle incomes.

H.4. Housing Goals and Objectives Statement. A narrative reflecting the community's short and long term goals to address gaps in ~~affordable~~ housing needed by households and individuals of low- moderate, and middle-income will be generated.

H.5. Preliminary Future Housing Map and Accompanying Goals and Objectives Report. A GIS-map showing the location, type and quantity of new housing units, including housing for individuals, families and those with low, moderate and middle incomes shall be created. A narrative shall accompany the map describing the rationale used to explain the priorities and locations for the types of housing to be created in the community and the method used to develop the future housing priorities.

Step #1: Gather Information and Complete Housing Supply Inventory

MRPC will collect the following data:

Data	Source
# dwelling units, 1990 vs. 2000	Census
Age of dwelling units	Census
Zoning analysis (potential housing units per zoning district)	Buildout Analysis
Median Sales $	Banker & Tradesman
# building permits, 1990- 2000, S-F v M-F	Census
Renter occupied vs. owner occupied, 1990 vs 2000	Census
# subsidized units (Chapter 40B)	DHCD Inventory
Vacancy rates, renter vs. owner, 1990 vs. 2000	Census

Using the data above, MRPC will describe the community's housing stock and recent growth trends, including housing density, costs, number of subsidized units, *opportunities for individuals ~~across a broad range of incomes~~* and households with low, moderate, and middle-income, and vacancy rates. Presentation will include graphics and brief narrative.

Step #2: Complete an Assessment of Housing Demand

MRPC will collect the following data:

Data	Source
Current and future population	Census and MRPC projections
Current and future household size	Census and MRPC projections
Current and future number of households	Census and MRPC projections
Current and future age distribution	Census and MRPC projections
Estimated recent income level *including poverty-level income households, low-income, moderate income*, and *middle-income ~~and upper income~~ households*	1990 Census adjusted by 1997 Census Study, 2000 Census data, and by HUD regional median
Housing Authority waiting list	Housing Authority
Affordable housing gap (#units needed to reach 10%)	MRPC (Census and DHCD data)
Regional affordability gap indicators using regional median income, local average wage, and median local housing sales prices types	HUD, DET, Banker and Tradesman

Using these data, MRPC will assess current and future population, household size, age distribution, and income estimates. This information will be presented graphically with a brief narrative.

Step #3: Quantify Need by Comparing Supply and Demand

MRPC will prepare a housing needs report comparing supply and demand. Housing needs will be determined using the data collected in Steps 1 & 2 above, analyzed by considering project numbers of households (MRPC) projections, distributed by historic income levels; the 10% affordable housing gap; and the housing authority waiting list; these will be compared to recent housing construction trends and buildout projections with regard to building types. Study will estimate what the market is likely to produce based on recent building permit trends and identify gaps in income level served and in rental vs. ownership (as-

suming very low and low income households are best served by rental*). The narrative will also discuss the availability of housing stock that is available for individuals across a broad range of incomes (i.e., low and moderate incomes and up to the 150% of median as set forth in Executive Order 418).*

Step #4: Addressing Needs by Setting Goals and Objectives
MRPC will present the above information to local officials and others participating in the process and will conduct a public forum to develop goals and objectives to address the gaps. The discussion will seek to relate the overall goals and objectives identified in the community visioning process with the results of the supply and demand analysis. The outcome will be a Housing Goals and Objectives Statement that includes numerical goals for housing needed in the short and long-term.

The community will organize the public process to achieve consensus: MRPC will present materials, help facilitate discussion, and prepare drafts and revisions of the statement. Assuming the community achieves consensus, MRPC will assist in developing more specific goals, such as where, when, what type, and for whom new housing should be built. MRPC will participate in up to two meetings to complete Step #4.

Step #5: Draft Preliminary Future Housing Map
Using the buildout map and results of Step #4 as a starting point, MRPC will lead a discussion comparing anticipated housing with desired housing as determined in Step #4 above. The map will be annotated by hand to show where changes may be necessary and where various housing types should go.

Step #6: Identify Additional Housing Opportunities
Based on Step #5, MRPC will lead discussion to identify preliminary locations for new housing that are most appropriate for each type of housing. Show relationship to transportation and water infrastructure, environmental resources, employment opportunities, etc.

Upon the completion of the above, a review of all local bylaws will be conducted. Barriers and enhancements to local bylaws to facilitate the development of affordable housing will be reported to the community. The public forum, key interviews, discussion and research will generate a preliminary draft list of potential barriers and enablers, such as potential zoning changes, programs, and resource needs.

MRPC will prepare a briefing paper summarizing the results.

HOUSING PRODUCTS
Housing Inventory Map(s) and Accompanying Report
Housing Needs Report
Supply and Demand Comparison
Housing Goals and Objectives Statement – ~~Request for waiver submitted to the DHCD. Approval of waiver anticipated. EO 418 tasks to be completed by the MRPC shall not duplicate previous efforts.~~
Preliminary Future Housing Map and Accompanying Goals and Objectives Report
Review of local bylaws. Recommendations to be proposed for the development of affordable housing within the community based upon the needs identified through the above tasks.

Consultant for this Element: Montachusett Regional Planning Commission.

Fee for this Element:

STAFF	TOTAL HOURS	TOTAL BUDGET
Comprehensive Planning Director	10	$700.00
Comprehensive Planning Staff	45	$3,150.00
Transportation Planning Director		
GIS Technician	45	$3,150.00
TOTAL	100	$7,000.00

The cost for work related to the development of the Housing element shall not exceed $7,000.00.

ECONOMIC DEVELOPMENT
The Consultant shall deliver Community Development Plan, Economic Development Element planning services, report(s) and map(s) in accordance with the "Minimum Requirements" of the Commonwealth of Massachusetts, Community Development Plan program as per Executive Order 418, Community Development Plan Guidebook and subsequent technical guidance received from relevant State departments. At a minimum, the services to be delivered include:

ED.1. Current and Future Economic Profiles. An assessment of the current economic base in the community including an inventory of major employers and number of jobs, demographic and income data, unemployment rates, labor force statistics, commercial vacancy rates and space available in commercial and industrial buildings (and commercial and industrial parks, where applicable) shall be created.
Ensure the future economic profile addresses requirements for workforce, land/buildings, housing, and needs of local businesses

ED.2. Economic Development Goals Statement. Utilizing the information collected through the public forum and the above goals and objectives will be written for the Municipality. A narrative will address the job opportunities that are available to low, moderate and middle-income individuals. The Consultant will inform the Municipality how the Municipality may implement practices to retain existing businesses and attract new businesses to the community, which will provide job opportunities for low, moderate and middle-income persons.
Ensure the goals and objectives are assessed in light of the buildout maps 1 and 2
Ensure the narrative includes specific references to how the community will attract, retain, and/or create job opportunities for low, moderate, and middle income individuals

ED.3. Implementation Strategy and Accompanying Map. An Economic Development Implementation Strategy Map identifying the location, type and quantity of commercial and industrial uses in the community, and indicating area(s) of future commercial and industrial growth shall be created. The map shall also show, at a minimum, locations of transportation infrastructure, water and sewer system components, and environmental constraints. The narrative accompanying the map will discuss the Economic Development Implementation Strategy, summarize the goals and objectives, and the rationale for the strategy.

Ensure the economic development suitability map addresses all appropriate locations for commercial/industrial activity. ED2, described above, should provide focus for where the community wishes to see development
Ensure the narrative describes the rationale used to develop priorities reflected in the economic suitability map
Ensure the rationale for the suitability map identifies the number, type, and skill level of job opportunities to be created

ED.4. Create a report on the possible development scenarios for the 101-business park. An analysis of the possible land development and redevelopment possibilities of all industrial zoned land shall be conducted. Public and private development and redevelopment options will be examined. The resources available to both public and private sector development and redevelopment entities will be listed. Potential scenarios for redevelopment shall be mapped and explained within the Community Development Plan.

ED.5. Downtown municipal properties redevelopment report.
An analysis of the possible land development and redevelopment possibilities of downtown municipally-owned public lands shall be conducted. Public and private development and redevelopment options will be examined. The resources available to both public and private sector development and redevelopment entities will be listed. Potential scenarios for redevelopment shall be mapped and explained within the Community Development Plan.

Step 1. Gather data and complete current and future economic profile.
The MRPC staff will gather all available economic data to provide a profile of existing economic conditions in the community. The types of data to be gathered includes, where available, as well as any other data available through the community or other sources:
Location and number of businesses ~~(1997~~ (2000 and more recent Economic Census)
Employers and employees in the community (~~1997~~ 2000 and more recent Economic Census)
Largest employers
Types of businesses by industry (DET or BLS data)
Recent Growth Trends (US Census)
Size of workforce and unemployment (DET data)
Average wage by sector (DET data)
Jobs to labor ratio
The above data will be shown in tabular form or will be shown on a map of the community, which will be used in visioning/discussions within the community.

Step 4. Assess Economic Development Objectives in relationship to Land Use Suitability Maps
Based on the discussions at the public forum, a map illustrating the target areas for economic development will be prepared. Depending upon the feedback from the community as to whether this represents a firm concept of their economic goals or only a draft for future discussion, this information may or may not be added to Map 5 and Map 6 described previously in the Natural Resources component of the EO418 scope.

Step 5. Alternative Economic Development Strategies/Future Plans and Resources
Based on the analysis above, and the input received at the public forum, prepare a brief listing and descriptions of alternative economic development strategies that are available for consideration by the community, as well as other resources for the community to use in follow-up economic development discussions.

PRODUCTS
1. Current and Future Economic Profiles.
2. Economic Development Goals Statement.
3. Implementation Strategy and Accompanying Map.
4. Market demand analysis for development of Business Park.
5. Business Park siting study.

6. Bylaws review in relation to facilitating business development in the community.

Consultant for this Element: Montachusett Regional Planning Commission.
Fee for this element:

STAFF	TOTAL HOURS	TOTAL BUDGET
Comprehensive Planning Director	57	$4,000.00
Comprehensive Planning Staff	50	$3,500.00
Transportation Planning Director		
GIS Technician	50	$3,500.00
TOTAL	157	$11,000.00

The cost for work related to the development of the Economic Development element shall not exceed $11,000.00.

OPEN SPACE AND RESOURCE PROTECTION (part moved earlier in Scope and part moved to putting it all together.)

TRANSPORTATION
The Consultant shall deliver the Community Development Plan, Transportation Element planning services, report(s) and map(s) in accordance with the "Minimum Requirements" of the Commonwealth of Massachusetts, Community Development Plan program as per Executive Order 418, Community Development Plan Guidebook and subsequent technical guidance received from relevant State departments. At a minimum, the services to be delivered include the following.

T.1. A GIS map of the regional or sub-regional area that identifies transportation improvements that can be implemented within the next one to five years will be created based upon the input received from the Municipality. The Consultant shall collect and analyze information, gathered through the public forum, about the Municipality's local and sub-regional (in concert with at least three contiguous communities) transportation needs. Transportation goals and short and long term objectives shall be reported to the community. The map showing transportation improvements, that can be accomplished within the next one to five years, shall show the location, type and quantity of any transportation amenities including:
Matters of safety
Access
Congestion
Transit
Intermodal connections; and
Environmental considerations.

T.2. Infrastructure Conditions and Needed Improvements in the Sub-region.
Each community's plans for Natural Resources, Housing and Economic Development will impact not only its local transportation infrastructure but also the infrastructure needs of surrounding communities. In addition, the combined land use proposals of adjacent communities will have implications for the transportation infrastructure of the immediate sub-region and for the region as a whole. MRPC, through its role as facilitator of discussions in the Natural Resources, Housing and Economic Development components, will emphasize the need to coordinate these elements with each other, and to look at the local and regional transportation implications of the land use decisions.

Defining "Existing Conditions" of local transportation infrastructure. Some transportation funds should be available during the discussions with the community to enable staff to develop base maps that illustrate the volume/capacity ratios and existing levels of service for existing major roadways and transit systems. MRPC proposes that up to 30 hours in transportation funds be allowed for expenditures to develop the base data for the community and to discuss the transportation implications of land use decisions made during the discussions of the other three core elements.

Defining Sub-regional Transportation Infrastructure Needs. Following the initial community level transportation discussions relating to land use implications/alternatives, the transportation element expects to address transportation needs a minimum of three communities working together. This coordinated look at infrastructure needs will occur after each community has completed the other three core elements of the Community Development Plan. This will enable the communities to examine the implications of their Community Development Plans on the transportation needs of the sub-region.

To address transportation needs from a sub-regional perspective, MRPC will first prepare a map for the 3+ communities working together on the transportation element, that combines the results of MAP 6 (from Natural Resources Element) from each community into a sub-regional map, and adds the existing transportation network (roadways and transit system) serving these communities. MRPC will then host a public forum, at which time the common transportation goals of the communities will be determined. Potential future projects of priority across the communities will be mapped during this effort.

T.3. Intersection and Traffic Deficiency Analysis

Objective:
To study intersections of concern related to the safe and efficient flow of traffic at Routes 13 and 119 in order to develop viable alternatives and improvements that can be implemented by the community that addresses the identified problems and deficiencies. A re-routing plan of Route 101 through the town center shall be created.

Activities:
Develop list of roadways and locations, i.e. intersections that are of concern to the municipality.
Identify and collect necessary data to conduct a study and review of the identified intersection problem(s). Data could include: traffic volumes, turning movement counts, accident data and existing conditions.
Prepare a study that evaluates existing operational conditions and identifies potential solutions/alternatives to address deficiencies.
Prepare a GIS based map (if applicable) that outlines location(s) of concern and identified solutions. The map would identify areas for future projects.

Products:
Traffic Report that evaluates the existing operational conditions at identified areas or intersections of local concern. Recommended alternatives will be reviewed and identified to address problems. This report will stand as support data for project requests to the Massachusetts Highway Department.
Summary of work with recommendations for follow-up actions.
Map(s) that identify intersection projects.

Notes:
This work will be in keeping with all agreements developed for the community development plans and the results will become part of the integrated reports.
This analysis is similar to that being conducted in Templeton (at the intersection of Route 2A and North and South Main Streets) and Winchendon (at the intersection of State Route 12 and Central Street and State Route 12 and Academy Street) and Clinton.

T.4. Rail-to-Trail Study.

Objective:
To develop a Trail Plan that can be utilized by the Town to establish goals and objectives related to the development of multi-purpose trails within the community. In addition, how these identified trails can be connected to existing or proposed trails of neighboring communities will be examined. The Plan will outline the identified corridor(s) and their potential as multi-purpose trails focusing primarily on an unused right of way, supposedly owned by the Town of Ashburnham, located in the southern part of the community. Information will be gathered on the potential trails regarding their: location, natural features, physical structures (i.e. bridges, trestles, etc.), and historical background. The benefits to the community in terms of recreational use, conservation, and economic development will also be compiled. How these trails correspond to the town's master plan as well as state, regional and national trail plans will be evaluated. The Towns of Fitchburg, Hubbardston, Leominster, Templeton are undertaking this same activity within the region.

Activities:
Review current master plans, etc. related to identified trials within and outside of the community.
Identify local departments, coalitions and/or organizations interested in trail development in the community and region.
Develop list of potential trail sites for data collection and analysis.
Develop information on each trail that includes: location, description of natural features, physical structures, historical background, compatibility with local master plan, national and regional trail plans, recreational and environmental benefits and economic development potential.
Conduct review of funding sources to implement trail development.
Compile final trail study that identifies trails and pertinent data as well as prioritized listing for implementation.
Prepare a GIS based map that graphically identifies the potential trail locations and some of the related pertinent data. In addition, other maps will be prepared identifying physical features, etc as needed.
Identify and collect necessary data to conduct a study and review of the identified intersection problem(s). Data could include: traffic volumes, turning movement counts, accident data and existing conditions.
Prepare a study that evaluates existing operational conditions and identifies potential solutions/alternatives to address deficiencies.
Prepare a GIS based map (if applicable) that outlines location(s) of concern and identified solutions. Map would likely identify areas for future projects.

Products:
Prepare a trail plan that indicates and identifies potential trail routes within the community and the MRPC Region. The trail plan would outline local trails, benefits and features, funding options for implementation and priority.
Traffic Report that evaluates the existing operational conditions at identified areas or intersections of local concern. Recommended alternatives will be reviewed and identified to address problems. This report will stand as support data for project requests to the Massachusetts Highway Department.
Map(s) that identify potential trails, associated features and intersection projects.

Notes:
This work will be in keeping with all agreements developed for the community development plans and the results will become part of the integrated reports.

Consultant for this Element: Montachusett Regional Planning Commission.
Fee for this element:

STAFF	TOTAL HOURS	TOTAL BUDGET
Comprehensive Planning Director		
Comprehensive Planning Staff		
Transportation Planning Direc-	10	$700.00

tor		
Transportation Planning Staff	45	$3,150.00
GIS Technician	45	$3,150.00
TOTAL	100	$7,000.00

The cost for work related to the development of the Transportation element shall not exceed $7,000.00.

Final CD Plan "Putting It All Together"
NOTE: budget, funds will need to come from the Open Space Element
The consultant shall develop a report to accompany the final maps which discusses the community's rational for the final recommendations made for the Plan for all elements.

Maps 5A and 5B Land Use Changes Proposed by Community
Using Maps 1-4 developed above:
a) Hold public forums to determine public goals for areas to be protected by zoning or acquisition or other means
b) Determine which areas of community should be designed for residential and commercial and industrial uses (if any). These discussions will continue in the forums planned for housing and economic development.

Map 5A consists of sketch changes proposed by the townspeople relating to land uses. In order to save costs, THESE WILL NOT be incorporated into a GIS map, but rather will be the paper copy of the map used at the public forum onto which the areas are written.

Map 5B specifically illustrates only those areas where zoning changes are proposed in order to implement the goals of the public forum. This Map 5B WILL be in GIS format. Map 5b will be produced AFTER the community completes the housing, economic development and initial transportation planning discussions, in order to incorporate all of the proposed land use changes contemplated by the community.

MAP 6 Future Land Use Assuming Implementation of Zoning Changes
This is a repeat of Map 2 above, with the exception that this map takes into account the zoning changes shown on Map5B. Map 6 will show the future land uses based on conversion of zoning into 11 land use code per MassGIS, and show protected open space as hatch over land use. Since this map will incorporate the elements from all Community Development Plan components shown as Map5B, it will therefore represent the final community development plan for the community.

CD Plan Report
The Consultant shall deliver to the Municipality a report of the results of Putting It All Together. It shall include a report and GIS-produced maps (including data layers) with related narrative and data reflecting the findings reached through the four elements of the CD Plan through the Putting It All Together section and leading to the final recommendations shown on the accompanying maps.

GLOSSARY OF TERMS
Geographic Information Systems or "GIS". The process of creating maps utilizing computer hardware and software and linking the visual reference points (known as points, lines and polygons) with relevant information stored in a computer database program such as Microsoft Access.

Executive Order 418 (aka EO 418). Directive endorsed by former Governor Argeo Paul Cellucci on January 21, 2000 directing various state agencies to allocate $30,000 per community for the completion of a Community Development Plan addressing four elements: housing, economic development, open space preservation and recreation development, and transportation.

Community Development Plan. A planning document detailing the municipality's housing need and demand and future plan for housing development in concert with related planning in economic development,

open space preservation and recreation sites maintenance and development, and transportation planning.

Pre-planning services. Tasks that may be completed prior to the approval of the municipality's Community Development Plan Scope of Services. These consist of providing assistance to the community in the development of the scope of services, visioning procedures and collecting and reporting the community's assets and liabilities (determined through the public forum).

Buildout Analysis. A "buildout analysis" consists of a series of 4 or 5 geographical information system (GIS) based maps that illustrate a community's current zoning, the land available for development and how it is zoned, and maximum development possible in a particular community if every piece of developable land were developed based upon existing local zoning. Accompanying the maps are projections of the numbers of residents, households, public school students and water use at buildout. The buildout analysis provides a baseline for communities by demonstrating development as it could occur if no changes are made in current zoning. It is a planning tool designed to stimulate discussion and help communities identify if they are growing in the way they want and what, if any, changes they want to make.

Vision Statement or Visioning Statement. A succinct description of the results/direction of the public forum.

Scope of Services. Identification of the tasks necessary to complete the agreed-upon project.

MSA. Master Services Agreement. A contract between the Commonwealth of Massachusetts and a variety of private and public sector consultants, previously selected by the Department of Housing and Community Development (DHD) to supply Community Development Planning Services.

Visioning. The process of identifying common concerns, goals and objectives usually conducted in an open forum with a cross-section of representatives of the entity in question, and moderated by an independent facilitator.

Assets and Liabilities. Attributes of a community determined by the residents of that community during the public forum. These can be considered "strengths and weaknesses" as determined by the residents.

IX. NATURAL RESOURCE AND OPEN SPACE

MISER POPULATION PROJECTIONS: METHODOLOGY

The MISER Population Projections for Massachusetts, 2000–2020, employ a cohort-component model in which fertility, mortality, and migration are projected independently using the Census 2000 population by sex and age group as the launch for the 2010 projection.[14] The first step is the mortality component, which calculates the number of survivors to the end of the projection interval, by applying state-level age-specific survival rates to each age-sex cohort of the launch year population. Mortality and survival rates have changed significantly throughout the last century with the trend being toward lower mortality, higher survival, and higher life expectancy for both sexes, most age groups, nearly everywhere.

The next step is the migration component, which involves the calculation of net migration during the projection period using the forward survival rate method and the vital statistics method. The third step is the fertility component, which calculates the number of births during each projection interval by applying age-specific birth rates to the female population in each age cohort from ages 0 to 49, using a multi-year average of the recorded number of resident births during the period 1995–2001.

The birth rates for the MISER population projections were calculated using the average of five three-year averages: 1995–1997, 1996–1997, 1997–1999, 1998–2000, and 1999–2001. Over the last twenty years, in many cities and towns in Massachusetts the trend has been toward lower fertility rates and toward a shift to having births at later ages. Therefore the projection uses the most recent age-specific birth rates and holds these constant throughout the projection period.

The MISER population projections reflect the assumptions made about future fertility, mortality and migration trends, as well as about the group quarters population, and as such are subject to some degree of uncertainty. The population projections should be used as an interpretive tool and not as a forecast or prediction of future population, since many factors can play into changes in population, such as changes in economic conditions, unforeseen events, and the like.

[14] MISER Population Projections for Massachusetts, 2000–2020, Stefan Rayer, Ph.D., July 17, 2003

LAND USE SUITABILITY METHODOLOGY

**The Draft Land Use Suitability Model is a way to represent where there are the highest concentrations of resources present in the town. The steps taken to produce this model are as follows:

1. We complied a list of all the resources present in the MRPC Region. Those resources include:
   *Wetlands
   *DEP Non-Potential Drinking Water Source Areas
   *DEP Outstanding Resource Waters
   *DEP Interim Wellhead Protection Areas
   *DEP Zone 1's, 2's, A's, B's & C's
   *FEMA Q3 Flood Zones
   *DEP River Protection Act Buffers
   *MDC Watershed Protection Act Buffers
   *Aquifers (High, Med & Low Yield)
   *Surficial Geology (Alluvium and Sandy Soils)
   *NHESP Certified Vernal Pools, Potential Vernal Pools, BioMap Core Habitats, Biomap Supporting Natural Landscapes, Priority Habitats for State-Protected Rare Species & Estimated Habitats of Rare Wildlife
   *MRIP Riparian Corridors, Natural Land Riparian Corridors & Contiguous Natural Lands
   *MRPC Designated 20' Buffers around Bikeways, Proposed Bikeways, Proposed Rail Trails, Tracks & Trails & Long Distance Trails
   *Areas of Critical Environmental Concern
   *Non- Permanently Protected Open Space

2. From this list we identified the resources that are present in the town.

3. We then gave each resource a specific numeric value as represented in the "eo418_dlus_ mapping_elements" spreadsheet.

4. Next we unioned (or merged together) all of the resources together into one master layer for the town. This master layer represents all of the resources present in the town, and indicates what each of those resources is.

5. We then clipped the master layer to the limits of the town boundary, and removed the permanently protected open space and surface water from it.

6. The result of this process is a Draft Land Use Suitability Model that graphically shows the numeric value of the resources present in specific areas throughout the town.

DRAFT LAND USE SUITABILITY MODEL

Available Datalayers and Weighting of Environmental Resources

DATA LAYER	VALUE	CLASSIFICATION
Base Data		
Town Boundary	**X**	
Surrounding Mask	**X**	
Roads	**X**	
Rail Lines	**X**	
Municipal Buildings	**X**	
Route Numbers	**X**	
Hydrography		
Streams 5k	**X**	
Streams & Rivers	**X**	
Lakes and Ponds	**X**	
Wetlands (Legend Layer)	**X**	
Wetlands NWI	**1**	**WETCODE= 4,7,8,12,14,15,16= 1**
Wetlands 5k		**POLYCODE= 4,5,6,7,8,9= 1**
Water Resources		
Watersheds	**X**	
DEP Non Potential Drinking Water Source Area	**1**	
DEP Public Water Supplies	**X**	
DEP Ground Water Discharge Permits	**X**	
DEP Tier Classified Oil or Hazmat Sites	**X**	
NPDES Permits	**X**	
DFWELE Anadromous Fish	**X**	
DEP Outstanding Resource Waters	**1**	
DEP Interim Wellhead Protection Areas	**1**	
Zone I- DEP Wellhead Protection Areas	**1**	
Zone II- DEP Wellhead Protection Areas	**1**	
Zone A- DEP Surface Water Supply Protection Areas	**1**	
Zone B- DEP Surface Water Supply Protection Areas	**1**	
Zone C- DEP Surface Water Supply Protection Areas	**1**	
FEMA Q3 Flood Zones	**1 & 2**	**ZONE= A/AE= 2, X500= 1**
DEP Rivers Protection Act Buffers	**1 & 2**	**RV_ZONE= 100= 2; 200= 1**
MDC Watershed Protection Act Buffer	**1 & 2**	**BUF_ZONE= 200= 2; 400= 1**
Aquifers	**1 & 2&3**	**CODE=2= 3; 3= 2; 4= 1**
Surficial Geology (7=Alluvium, 1= Sand)	**1 & 2**	**CODE=7= 2; 1= 1**
Wildlife Habitat		
NHESP Certified Vernal Pools	**1 & 2**	**100 FT Buffer= 2, 300FT Buffer= 1**
NHESP Potential Vernal Pools	**1 & 2**	**100 FT Buffer= 2, 300FT Buffer= 1**
NHESP BioMap Core Habitat	**2**	**COREPOLY= 1**
NHESP BioMap Supporting Natural Landscape	**1**	**BIOSNLPOLY= 1**
NHESP Priority Sites of Rare Species& ENC	**2**	
NHESP Estimated Habgitats of Rare Wildlife	**1**	
MRIP Riparian Corridors (RIPC)	**1**	**INSIDE= 100= 1**
MRIP Natural Land Riparian Corridors (NATC)	**2**	**NAT= 1, INSIDE= 100= 2**

MRIP Contiguos Natural Lands (NATL)	**1**	**NAT= 1= 1**

DATA LAYER	**VALUE**	**CLASSIFICATION**
Land Use		
State Register of Historical Places- Points	**X**	
Landmark- Points	**X**	
Public Access Board Sites	**X**	
Canoe Access Points	**X**	
Elevation Contour Lines	**X**	
Canoe Trips	**X**	
MRPC Existing Bikeways	**1**	**20 FT Buffer= 1**
Bicycle Trails	**1**	**20 FT Buffer= 1**
MRPC Proposed Bikeways	**2**	**20 FT Buffer= 2**
MRPC Proposed Bikeways	**2**	**20 FT Buffer= 2**
MRPC Proposed Rail Trails	**2**	**20 FT Buffer= 2**
Tracks & Trails	**1**	**20 FT Buffer= 1**
Long Distance Trails	**1**	**20 FT Buffer= 1**
Areas of Critical Environmental Concern	**1**	
State Register of Historical Places- Polygons	**X**	
Scenic Landscapes	**X**	
Protected & Recreational Open Space	**1**	**LEV_PROT= T, L, N= 1**
Chapter 61 Lands	**X**	
Land Use	**X**	

BOLD **Resources that are applicable to the Draft Land Use Suitability Model**
BLACK Data is not applicable to the Draft Land Use Suitability Model.

DRAFT LAND USE SUITABILITY MODEL CREATION GUIDE: AVAILABLE DATA LAYERS

GROUP LAYER	VALUE	DATA LAYER	CLASSIFICATION
Base Data	X	Town Boundary	
	X	Surrounding Mask	
	X	Roads	
	X	Rail Lines	
	X	Municipal Buildings	
	X	Route Numbers	
Hydrography	X	Streams 5k	
	X	Streams & Rivers	
	X	Lakes and Ponds	
	X	Wetlands (Legend Layer)	
	1	**Wetlands NWI**	**WETCODE= 4,7,8,12,14,15,16= 1**
		Wetlands 5k	**POLYCODE= 4,5,6,7,8,9= 1**
Water Resources	X	Watersheds	
	1	**DEP Non Potential Drinking Water Source Area**	
	X	DEP Public Water Supplies	
	X	DEP Ground Water Discharge Permits	
	X	DEP Tier Classified Oil or Hazmat Sites	
	X	NPDES Permits	
	X	DFWELE Anadromous Fish	
	1	**DEP Outstanding Resource Waters**	
	1	**DEP Interim Wellhead Protection Areas**	
	1	**Zone I- DEP Wellhead Protection Areas**	
	1	**Zone II- DEP Wellhead Protection Areas**	
	1	**Zone A- DEP Surface Water Supply Protection Areas)**	
	1	**Zone B- DEP Surface Water Supply Protection Areas)**	
	1	**Zone C- DEP Surface Water Supply Protection Areas)**	
	1 & 2	**FEMA Q3 Flood Zones**	**ZONE= A/AE= 2, X500= 1**
	1 & 2	**DEP Rivers Protection Act Buffers**	**RV_ZONE= 100= 2; 200= 1**
	1 & 2	**MDC Watershed Protection Act Buffer**	**BUF_ZONE= 200= 2; 400= 1**
	1 & 2&3	**Aquifers**	**CODE=2= 3; 3= 2; 4= 1**
	1 & 2	**Surficial Geology (7=Alluvium, 1= Sand)**	**CODE=7= 2; 1= 1**
Wildlife Habitat	1 & 2	**NHESP Certified Vernal Pools**	**100 FT Buffer= 2, 300FT Buffer= 1**
	1 & 2	**NHESP Potential Vernal Pools**	**100 FT Buffer= 2, 300FT Buffer= 1**
	2	**NHESP BioMap Core Habitat**	**COREPOLY= 1**
	1	**NHESP BioMap Supporting Natural Landscape**	**BIOSNLPOLY= 1**
	2	**NHESP Priority Sites of Rare Species& ENC**	
	1	**NHESP Estimated Habgitats of Rare Wildlife**	

	1	**MRIP Riparian Corridors (RIPC)**	**INSIDE= 100= 1**
	2	**MRIP Natural Land Riparian Corridors (NATC)**	**NAT= 1, INSIDE= 100= 2**
	1	**MRIP Contiguos Natural Lands (NATL)**	**NAT= 1= 1**
Land Use	**X**	State Register of Historical Places- Points	
	X	Landmark- Points	
	X	Public Access Board Sites	
	X	Canoe Access Points	
	X	Elevation Contour Lines	
	X	Canoe Trips	
	1	**MRPC Existing Bikeways**	**20 FT Buffer= 1**
	1	**Bicycle Trails**	**20 FT Buffer= 1**
	2	**MRPC Proposed Bikeways**	**20 FT Buffer= 2**
	2	**MRPC Proposed Bikeways**	**20 FT Buffer= 2**
	2	**MRPC Proposed Rail Trails**	**20 FT Buffer= 2**
	1	**Tracks & Trails**	**20 FT Buffer= 1**
	1	**Long Distance Trails**	**20 FT Buffer= 1**
	1	**Areas of Critical Environmental Concern**	
	X	State Register of Historical Places- Polygons	
	X	Scenic Landscapes	
	1	**Protected & Recreational Open Space**	**LEV_PROT= T, L, N= 1**
	X	Chapter 61 Lands	
	X	Land Use	

BOLD **Resources that are applicable to the Draft Land Use Suitability Model**

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XI. TRANSPORTATION APPENDIX